DOCUMENT RESUME

ED 121 971 CE 006 726

TITLE	Health and Health Related Career Exploration: Exemplary Project.
INSTITUTION	Portland Public Schools, Oreg.
SPONS AGENCY	Oregon State Dept. of Education, Salem.
PUB DATE	Jun 74
NOTE	290p.; Some pages will not reproduce well; For related document, see CE 006 727
EDRS PRICE	MF-$0.83 HC-$15.39 Plus Postage.
DESCRIPTORS	*Career Education; Career Exploration; Careers; Course Content; Decision Making; Demonstration Projects; Health; Health Activities; *Health Education; Health Occupations; Human Body; *Instructional Materials; Integrated Curriculum; *Learning Activities; *Resource Materials; Secondary Education; Self Concept; Self Evaluation; Worksheets
IDENTIFIERS	Oregon (Portland); Roosevelt High School

ABSTRACT

The manual contains secondary level materials designed to integrate career education concepts into the Roosevelt High school (Portland, Oregon) health education curriculum. The materials are divided into three sections. The first concerns self-concepts and presents: short-term activities designed to encourage students to begin thinking about themselves such as constructing a personal coat-of-arms and analyzing popular music; long-term activities for self-examination such as analyzing novels and writing epitaphs; and self-evaluation activities such as a self-esteem inventory and a maturity questionnaire. The second section, decision making, concerns: information gathering regarding food and nutrition; skill building through problem solving; and practical applications of decision making with respect to the functioning of the various systems of the human body, social health issues, and social problems. The third section, exploration, concerns: personal exploration of physical characteristics, physical fitness, health history, and family health; communication exploration of speech, hearing, body language, sight, and written forms of communication; evaluating and exploring careers in the health field; and activities beyond the classroom. (JR)

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HEALTH AND HEALTH RELATED CAREER EXPLORATION

EXEMPLARY PROJECT
#26-001-217

ROOSEVELT HIGH SCHOOL
6941 N. Central Street
Portland, Oregon

June 1974

MARGARET SMITH
PROJECT DIRECTOR

CE 006 726

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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TABLE OF CONTENTS

Overview 1
Sights on Students 3
How to Use Materials in this Collection 4
Self Concept 6
Short Term Activities 9
Coat of Arms 10
One Word Description 11
Unfinished Sentences 12
Bean Bag Experiment 13
Letter to Myself 14
Letter to a Friend 15
Quotes 16
Music 18
Long Term Activities 25
What's in a Name? 26
Jonathan Livingston Seagull 28
Two Ideal Days 30
Cave In 31
The Facade 32
Leo Beuerman 33
Communication/Cooperation 34
Obituary 36
Epitaph 37
What's Your Preference? 38
Self Evaluation Activities 41
Find Your Own Interest 42
My Abilities 44
How Do You Feel About Work? 45
Self Esteem Inventory 49
Maturity Questionnaire 52
Decision Making 54
Information Gathering 57
I Want to Learn 58
Food By Chance or Choice 59
Nutrition I.Q. 60
What Do You Want Out of Life? 61
Drug Questionnaire 62
Skill Building 64
Worksheets 65
Forced Ladder Choice 71
Grid 72
Twenty Things I Love to Do 74
Masculinity and Femininity 75
$ Can Make Things Happen 76
Alligator River 77
Fall Out Shelter 78
Practical Application 79
Body Systems 80
Circulatory 81
Digestive . . . . .

Endocrine 97
Excretory 102
Muscular 106
Nervous 113
Respiratory 120
Reproductive 127
Skeletal 134
Social Health Issues 141
Aging 142
Alcohol 145
Ecological Living 148
Health Products/Services/Quackery 151
Experiments 157
Gambling 158
Tobacco 166
Survival 171
Water Pollution 174
Exploration 177
Personal Exploration. 180
Vision (Snellen) 181
Vision (Peripheral) 182
Hearing 183
Speech 184
Blood Typing 186
Temperature 187
Pulse 191
Respiration 193
Activity Changes/Circulation & Respiration 195
Personality Traits 197
Match Your Abilities to Careers in Health 198
Fitness Experiment 204
Personal Health Questions 205
Personal History Questionnaire 206
Personal History 207
Family Medical Record 208
Communication Explorations 211
One Way/Two Way Communication 212
Listening and Clarity 218
Intonation of Voice/Did I Really Say That? 219
Body Language 221
Noise 222
Written Communication 223
Map Reading and Written Communication. . . 225
Medical Terminology 227
Hearing and Speech Aides 229
I (Eye) Care 230
Independent Projects 231
Impaired Vision/Braille 232
Impaired Hearing/Finger Spelling . . . 233

Evaluating and Exploring Careers 234
Who Would You Choose? --- Doctors 235
Dr. W_____/Who and What 236
What Are Health Careers All About? 239
Exploring A Health Career 242
Ecology/Conservation Career Interest Packet . . . 243
Nursing Career Interest Packet 251
Physical Therapy Career Interest Packet 258
Occupational Therapy Career Interest Packet . . . 267
Beyond the Classroom 271
Health Career Groupings 272
Progression of Exploratory Experiences. 273
Sample Exploratory Experiences 274
Suitable Resource Materials 276

Appendix A - Roosevelt Curriculum 277
Appendix B - Credits 278

HEALTH & HEALTH RELATED CAREER EXPLORATION

ABSTRACT OF PROJECT #26-001-217

ROOSEVELT HIGH SCHOOL - PORTLAND, OREGON

The Health and Health-Related Career Exploration Project, an examplary program, is designed to integrate career education materials: (1) pertinent to student understanding of themselves and the decision-making process (applicable to all areas of career selection), and (2) those specific to the health area into the existing health education program.

The Roosevelt Health Education program, a state requirement for all high schools, has two primary objectives:

1. to equip young adults in skills which can be utilized in personal decision-making, and
2. to inform young adults of the numerous current health issues which exist individually, community-wide and world-wide.

Therefore, it becomes obvious that the required health course should include the area of career exploration as the basic ingredient of its curriculum.

It has been necessary to develop devices which allow every student to begin functioning at whatever point he is. In most cases, it has been essential to help the student understand his own concepts of himself. Until a student can identify his self-concepts and test their validity, he cannot move to any type of successful decision-making, including career decisions.

Once a student knows "where he is at", it then becomes necessary for him to develop skills in decision-making, so things don't "just happen". Rather, he can begin to control his own destiny. Therefore, it is required that a student know what the decision-making process includes and that a student can successfully use the tools of decision making.

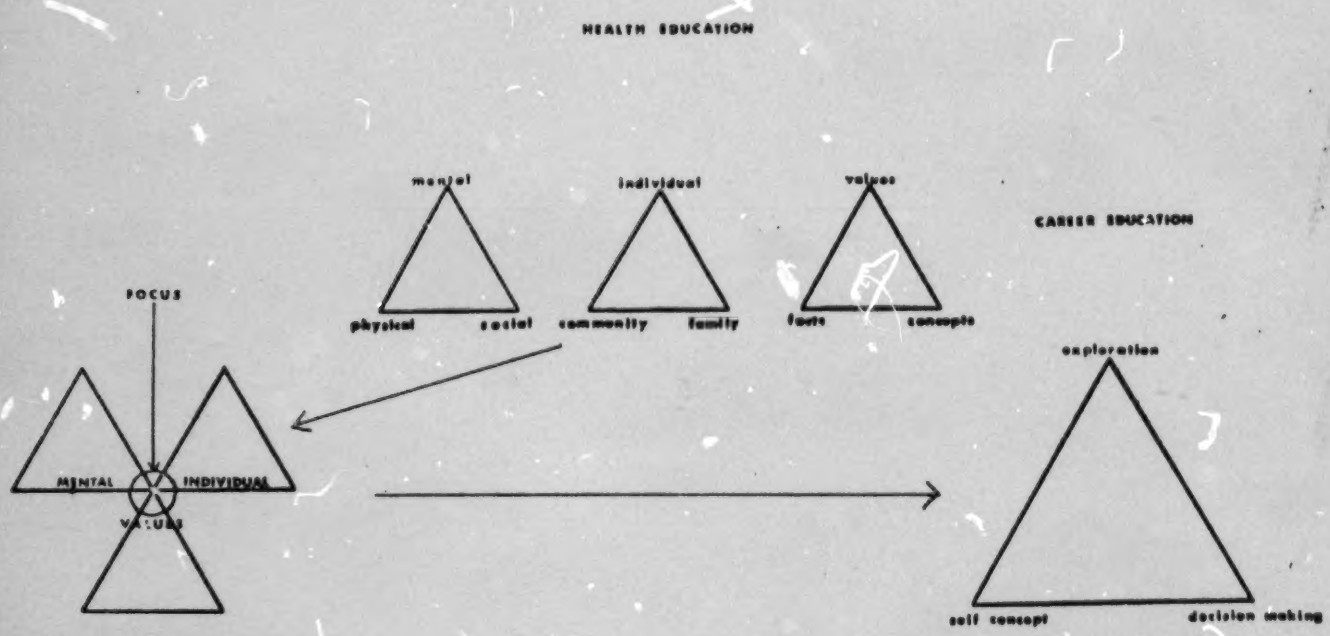
The third area which must be included is career exploration, the actual observation and analysis of information specific to career areas. These include integrated career roles in pertinent curricular areas, use of the Career Information System (computer), field experience exposures, guest speakers, interest surveys (GATB), individual interviews with practicing professionals, use of resource materials, independent and individualized projects and practical activity involvement.

Career involvement, on the exploratory level, is comprised of three primary areas -- self concept, decision-making and exploration. These areas are directly involved and aligned with the total concept of health education.

As health educators, we believe the exploration level of HEALTH CAREERS is appropriate and imperative; we believe it is a professional obligation.

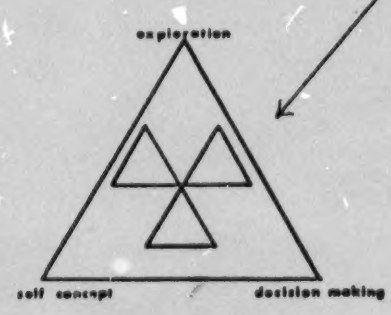
SIGHTS ON STUDENTS

Graphically the integrated career education/health education project at Roosevelt High School has as its base three health education components. From those components the project has developed as illustrated below.



THESE TRIANGLES FROM ROOSEVELT'S PLAN FOCUS ON THE INDIVIDUAL STUDENT, THE DEVELOPMENT OF A VALUING SYSTEM AND MENTAL HEALTH FACETS.

CAREER EDUCATION, on the exploratory level, is based on three facets: self concept, decision making and exploratory experiences.



When the three career education facets are superimposed upon the health education facets the program becomes an integrated whole. This is what we call the Roosevelt Face of Health.

HOW TO USE THIS COLLECTION OF MATERIALS

This collection of materials has been organized according to project components: self concept, decision-making, and exploration. The activities included here are only samples (tools) which have been successful in developing the above areas.

The activities included here are not designed as 'one shot' attempts. Rather, they are designed to: (1) supplement an overall health education course, and/or (2) add new impetus to curricular areas generally considered difficult to teach.

This collection can be utilized in two ways. First, a simple 'run through' approach can be used. Examine the table of contents and locate a topic which interests you. Directions or explanations for your particular selection can be found by identifying the underscored number accompanying it or the underscored heading directly preceding it. For example:

Letter to a Friend. 15
(Directions and explanations for Letter to a Friend can be found on page 15; the activity itself can also be found on page 15)

Gambling Experiment 158
(Directions and explanations for the Gambling Experiment can be found on page 158; the experiment itself follows on page 159 through 165).

I Want To Lean. 58
(directions and explanations for I Want To Learn can be found on page 57; the activity itself can be found on page 58.

Secondly, a thorough reading approach can be used. This approach will develop a more comprehensive understanding of the philosophy and curricular models utilized in this project as developed by the staff at Roosevelt High School. It is suggested that if you select the second approach, your reading be directed in the following order:

Overview . . . . . 1 - 2

How to Use This Collection of Materials . . . . . .4 - 5

Sights on Students 3

Self Concept . . . . . 6 - 8

Decision Making . . . . . 54 - 56

Exploration . . . . . .177 - 179

Perusual of the Table of Contents

Use First Approach (suggested on page 4)

It should be noted that on the upper right corner of most pages two numbers will be found. The upper number is the book page number. The number in parentheses denotes the page number of that particular activity.

NOTE: This collection of materials does not attempt to imply that activities alone are the end goal of health education. Activities without clearly defined objectives (fitted to your particular course content) are meaningless and time consuming to both students and teachers.

SELF CONCEPT

To be nobody but yourself in a world which is doing its best, night and day, to make you everybody else --- means to fight the hardest battle which any human being can fight, and never stop fighting.

e. e. cummings

The true value of the human being is determined primarily by the measure and the sense in which he has attained liberation from the SELF.

Albert Einstein

The little urchin makes a couple of feeble hops on one leg without falling down. And is filled with admiration at his dexterity, doubly so, because there are onlookers. Do we ever grow up?

Dag Hammarskjöld

Who am I? Where am I going? Why?

These century old questions are exceedingly difficult to answer. They are question of a complexity matched only by our society.

In educational circles, these questions are translated into more 'meaningful idioms' such as self awareness, personal growth, self identity and, most commonly -- self concept.

At no point in the development of the exemplary project at Roosevelt has our staff attempted to set a clear, closely worded statement of what we feel 'self concept' might mean. Rather we choose to develop for ourselves a workable, flexible definition as follows:

> To us at Roosevelt, 'self concept' means those aspects which deal with sense of self -- recognition of strengths and weaknesses -- defining of values and goals -- feelings for and about ourselves and others and all those items which significantly contribute to the development of a mentally healthy person.

We at Roosevelt believe that these issues are the first embarking point of health education. To explain more thoroughly, knowledge in health education is not directly translated into behavior. Cognitive (fact) knowledge alone is not adequate. But as cognitive knowledge is integrated into our personal frames of reference: attitudes, beliefs and values (those ingredients of the affective and action domains), then and only then will health education begin to 'take' and begin to 'make' markable change. Value building, value assessment and value change, in relationship to health education, only become possible when we allow ourselves the risk of confronting our sense of ourselves.

Perhaps some specific examples might explain:

> Cognitive, fact laden, tobacco education is meaningless to a fifteen year old if he sees himself as a 'tough teenager' lacking personal goals and only marking time until the day he becomes eighteen and the rights of custom require that his parents kick him out.

Water pollution experiments on local tap and recreational waters are meaningless to a fifteen year old who sees herself destined to have kids, keep house, make ends meet and accept the fact that people downtown or down state must know best when it comes to political pollution issues.

Birth control information (the where's, what's and how's) is meangingless to adolescents of both sexes as long as their cultural surroundings sell the idea that marriage or abortion will correct all mistakes; or as long as their cultural surroundings fail to accept the fact that adolescents are sexual beings with emerging identities, confronted daily by a multitude of conflicting values.

Careers, occupational possibilities, knowledge of the world of work are meaningless to students lacking goals or ideas about their future. Further, for students with unclear present concepts of themselves, projection into the future is frightening and frustrating and often responded to by resentment or indifference.

So then, how does a group of health educators grasp the issues implicit in self concept?

First, by looking at ourselves; seeing what we want; deciding what we're about, setting goals for ourselves and then by taking action. The action steps are risks -- risks that contain elements of both success and failure. But change does not occur or does not begin without the element of risk.

Second, by looking at what we do know about students, we realize: students should be allowed to help set their educational goals; positive attitudes and approaches encourage the learning process; students should be able to meet goals and achieve success; individual student concerns should be encouraged.

Third, by creating a liveable environment with students. The environment should encourage value assessment and clarity. In so doing, it should encourage self examination, motivation, creativity and success. The environment should not be a wonderland where failure is impossible.

It should not be one designed to evade truth, or anxiety, rather, it should be one which is real, practical and, at times, frustrating. We believe that 'to live successfully' means one must put forth personal effort.

Some practical examples are:

1. Positive reinforcement (e.g. grades given by symbols or points instead of letters).

2. Value clarification techniques (e.g. forced choice rankers, value grids).

3. Communication skills and techniques (e.g. simple--to--complex listening tapes, one-way, two-way communication games).

4. Assessment of personal strengths and weaknesses for creation of realistic positive self-concepts (e.g. attitude inventories, maturity questionnaires, health-directed autobiographis).

5. Death as a reality (e.g. obituaries, "The Right to Die", "In My Memory", euthanasia).

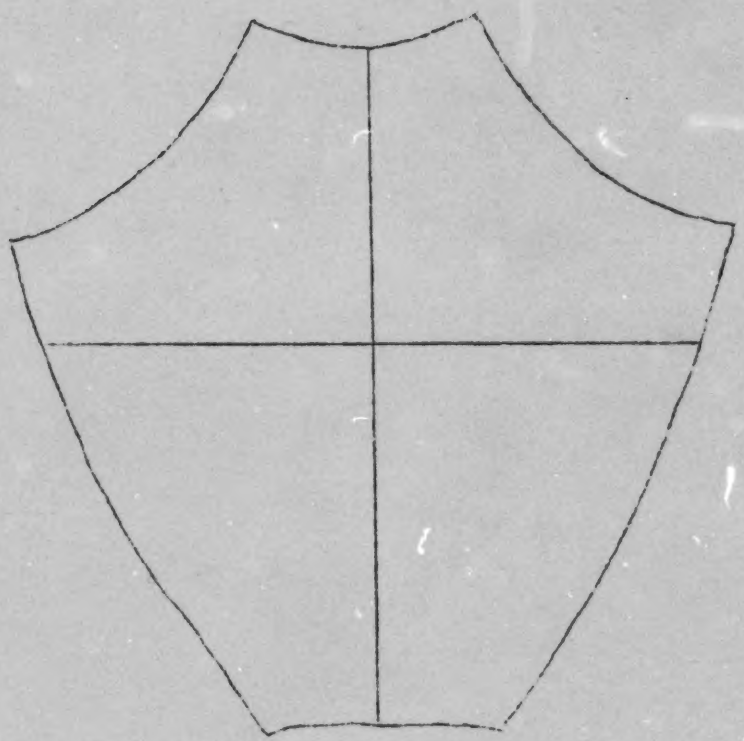
The following single page activities (pp. 10 through 24) are classroom projects which are designed for a student to begin thinking about himself.

After completion, they are returned to the student. They are ungraded but marked *, √ or --. Additionally, the teacher writes a comment on each sheet.

These are <u>not</u> intended as an assignment only -- classroom discussion precede and follow each.

PERSONAL COAT OF ARMS

Name _____



Answer each of the following questions by drawing, in the appropriate area on the coat of arms, a picture, design or symbol.

1. What do you regard as your greatest personal achievement to date?
2. What is the one thing that other people can do to make you happy?
3. What do you regard as your own greatest personal failure to date?
4. What three things would you like to be said of you if you died today.?

ONE WORD DESCRIPTION Name_____

What one word describes you? Do not use nick name or gender.

Explain.

UNFINISHED SENTENCES Name_____

1. People can hurt my feelings most by...

2. In a group I am....

3. When people depend upon me, I ....

4. People who expect a lot from me make me feel....

5. In school I do best when....

6. People who know me well think I am....

7. I need to improve most in...

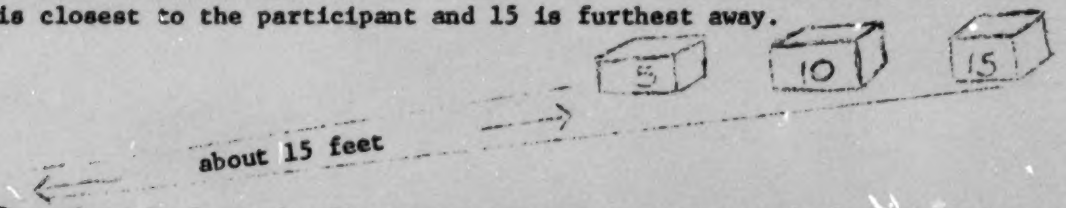
8. When people first meet me, they....

9. I have never liked....

10. I used to be....

BEAN BAG EXPERIMENT

Teacher Directions: Place three equal sized boxes (orange boxes are ideal) in an area outside the view of your classroom. Mark one box with a 5, another with a 10 and the third with a 15. Position the boxes so that 5 is closest to the participant and 15 is furthest away.



Procedure: Students do this experiment one at a time out of view of classmates. Give them a bean bag. Tell them to toss it into any box they wish. They get only one toss, and no further directions. After they have completed the experiment have them individually fill out the response sheet below.

Follow-up: Use the following questions to guide the class discussion toward goal setting concepts and personal importance concepts. (1) What meaning did the number have for you? (i.e. was 15 the best?) (2) Do big numbers always mean the most? (3) Do you think people who choose 5 are the kind who choose small goals for themselves? (4) Would you call those that choose 10 middle of the roaders? (5) Would you call those that choose 15 dare devils? (6) Would you think it would be better to toss the bean bag successfully into 5 or aim at 15 and take the risk of missing?

Variation follow-up: After the experiment is completed give students grades for the day according to their success in performance (e.g. 30 points or an A for successfully getting it into box 15; 25 points or an A for aiming and missing box 15; 20 points or a B for successfully getting it into box 10; 10 points or a D for successfully getting it into box 5; 5 points or an F for aiming and missing box 5.) Tell them that 'that's the way like is' --- you get paid for how you succeed. Such a teacher approach should set the scene for discussions such as 'lack of directions', 'importance of the skill', 'individual differences measured by one standard', etc... What really is success???

. . . . . .

BEAN BAG EXPERIMENT Name_____

1. Which box did you aim at? 5_____ 10_____ 15_____

2. Did you get the bean bag into the box? yes_____ no_____

3. What do you think this experiment might tell you about yourself?

LETTER TO MYSELF

Write a letter to yourself. It should be about a page or so long so that it can include what you think are important ideas or feelings about yourself. Make certain to date it with today's date.

So that you can get started perhaps you might include some of the following ideas or feelings:

1. How are things today? How do you feel -- what's going good, what might be going bad.

2. What things have you been doing lately. Some special interests-- new hobbies --- unusual happenings.

3. Who is important in your life right now? Family -- friends --- yourself.

4. Where would you like to be right now? Be as descriptive as you can.

5. When will you achieve just one goal for yourself? What is it?

6. Why are some things special to just you? Music --- hobbies --- sports.

Fold your letter. Seal it, or staple it shut. On the outside make a unique symbol that means you. You will use the symbol later in the year to identify your letter, so mark it down or make certain you remember.

LETTER TO A FRIEND OR RELATIVE

Teacher Directions: Most students have concerns for and about people who are close to them. Frequently they see people whom they care about making decisions or following courses of action which are disturbing to them. Students are often hesitant to discuss how they feel with their friends because they fear that their friends may "turn them off" or think that they are "playing God". However, after thinking about the situation, students frequently realize that they must explain their concerns to their friends without being judgmental.

Sincere caring about another person is a deep human element. Caring is often passed over in education; many teachers rarely give students an opportunity to clearly express how they feel towards another person. Try the suggested letter below -- it is an excellent teaching tool when associated with areas in addiction education.

NOTE: Offer students a free envelope and a stamp if students wish to mail their letter.

Assignment: Most of us are close to people and are concerned for and about them. Sometimes the people we care most about use a 'crutch' which we feel is or could become harmful to them. You may know someone like this -- a person you care about; a person you worry about.

Let them know what you think. Let them know how you feel. Write them a letter. Explain to them the point you want to make or the point you want them to understand.

QUOTES

Teacher Directions:

For some students it is difficult to create or explain ideas which are close to them. It often helps students if they are given a beginning or starting point. Ask students to (1) explain the meaning they get from the quote and/or (2) establish comparisons with the meaning they receive themselves. The quotations below are samples of many which can be used to help students to clarify ideas and feelings about themselves.

"To be nobody-but-yourself in a world which is doing its best, night and day, to make you everybody else -- means to fight the hardest battle which any human being can fight, and never stop fighting."

e.e.cummings

"The little urchin makes a couple of feeble hops on one leg without falling down. And is filled with admiration at his dexterity, doubly so, because there are onlookers. Do we ever grow up?

..

Dag Hammarskjold

"If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music which he hears, however measured or far away."

Henry David Thoreau

"In a poker game, no man discloses the content of his hand to the other players. Instead, he tries to dissemble and bluff.... (and) in a society which pits man against man, as in a poker game, people do keep a poker face; they wear a mask and let no one know what they are up to....

Sidney Jourard

"You are a child of the universe, no less than the sea and the stars. You have a right to be here.

Celestial Arts

QUOTES Name_____

The following are quotes of people speaking to YOU. Choose one and write about it -- what is the person saying to you?

1. "Sometimes I feel as if somebody is always talking about me. I feel as if I weren't wanted. When I walk down the street the kids are always yelling as they play. There are also some dogs."

John

2. "I am not like all the other children. I'm different because I like to hear birds singing, but I don't like to hear people shouting. It is not nice to hear people yelling or shouting in the street."

Isaac

3. 3. "I have felt lonely, forgotten, or even left out, set apart from the rest of the world. I never wanted out. If anything, I wanted in."

Arthur

4, "The turkey walks in the kitchen not knowing the thing that will happen. He walked in and got cooked and the chicken still waits."

M.B.

5. "to day I saw a very butiful pigen. It landed on top of a fence I tried to grab it with my hand but it flew befor I could grasp it. I saw it fly off and it look butiful."

A.P.

Perhaps one of the best vehicles for student involvement is music. Aside from use of atmosphere setting, music can be used as a significant tool to get listeners involved in real life emotional and social issues which most clearly involve the scope of health education (e.g. companionship, loneliness, drug use). The following records, lyrics and accompanying discussion question are useful samples. The records should be listened to; lyrics are included here only for teacher use.

OLD FRIENDS/Simon and Garfunkel

Old friends,
old friends
Sat on their park bench
Like bookends.
A newspaper blown through the grass
Falls on the round toes
On the high shoes
Of the old friends.

Old friends,
Winter companions
The old men
Lost in their overcoats,
Waiting for the sunset.
The sounds of the city,
Sifting through trees
Settle like dust
On the shoulders
Of the old friends.

Can you imagine us
Years from today,
Sharing a park bench quietly?
How terribly strange
To be seventy.

Old friends,
Memory brushes the same years.
Silently sharing the same fear....

1. How does a "newspaper blown through the grass" compare with old people?

2. What does it mean to grow old?

3. Can you put yourself in their place? What would it be like?

4. Does growing old have to be lonely? How can we cure loneliness?

5. Why does out society put old people on a bookshelf?

WITH A LITTLE HELP FROM MY FRIENDS/Lennon & McCartney

What would you think if I sang out of tune,
Would you stand up and walk out on me?
Lend me your ears and I'll sing you a song
And I'll try not to sing out of key:
Oh, I get by with a little help from my friends,
Hm, I get high with a little help from my friends,
Hm, gonna try with a little help from my friends.
What do I do when my love is away?
(Does it worry you to be alone?)
How do I feel by the end of the day?
(Are you sad because you're on your own?)
CHORUS
Do you need anybody?
I need somebody to love.
Could it be anybody?
I want somebody to love.
Would you believe in a love at first sight?
Yes, I'm certain that it happens all the time.
What do you see when you turn out the light?
I can't tell but I know it's mine.
CHORUS

1. What does it mean to be "insecure?"
2. Why and how do people "reach out" to others?
3. What does "love" mean in a friendship?
4. If a person is lonely, how can friends help? Should they help a person who refuses help?
5. Why do people struggle away from loneliness? Is loneliness necessarily bad, or do we make it that way? Why?

SIMON AND GARFUNKEL/Bridge Over Troubled Water

"When you're weary, feeling small,
When tears are in your eyes, I will dry them all;
I'm on your side, When times get rough
And friends just can't be found,
Like a bridge over troubled water
I will lay me down
Like a bridge over troubled water
I will lay me down.

When you're down and out,
When you're on the street,
When evening falls so hard
I will comfort you.
I'll take your part.
When darkness comes
And pain is all around,
Like a bridge over troubled water
I will lay me down.
Like a bridge over troubled water
I will lay me down.

Sail on silvergirl,
Sail on by.
Your time has come to shine.
All your dreams are on their way.
See how they shine,
If you need a friend
I'm sailing right behind
Like a bridge over troubled water
I will ease your mind.
Like a bridge over troubled water
I will ease your mind."

1. What does it take to offer yourself completely to someone?

2. Does our society allow the attitude in this song? Why or why not?

3. How does the last verse fit in with the first two verses?

4. Can anyone be a "bridge over troubled water"? How?

5. Have you ever been down? If so, could you accept someone's offer to help on these terms?

THE PUSHER / Hoyt Axton

You know, I smoked a lot of grass;
Oh Lord, I popped a lot of pills;
But I never touched nothing that my spirit could kill.
You know, I've seen a lot of people walking 'round with tombstones in their eyes.
But the pusher don't care if you live or if you die.

God damn the pusher, God damn the pusherman.

You know, the dealer is the man with enough grass in his hand;
But thepusher is a monster, good God! he's not a natural man.
The dealer, for a nickel, will sell you lots of sweet dreams,
But the pusher, when you buy it, loves to leave your mind to scream.

Chorus

Well now, if I were the president of this land,
You know, I'd declare total war on the pusherman.
I'd cut him if he stands and shoot him if he's run;
And I'd kill him with my Bible, my razor and my gun.

Chorus

1. What is the difference between a dealer and a pusher? Is one better than the other?

2. Does this song encourage or 'put down' drug usage? In what direction is our society moving? Why?

3. This song advocates violence to put an end to the pusher. Will that work? What do you suggest?

4. Do drugs kill the "spirit" of life? Or is there something more involved? If so, what?

A MOST PECULIAR MAN / Simon & Farfunkel

He was a most peculiar man.
That's what Mrs. Rierdan says,
And she should know,
She lived upstairs from him.
She said he was a most peculiar man.

He was a most peculiar man.
He lived all alone
Within a house,
Within a room,
Within himself.
A most peculiar man.

He had no friends,
He seldom spoke.
And no one, in turn, ever spoke to him,
Because he wasn't friendly
And he didn't care
And he wasn't like them.
Oh no, he was a most peculiar man.

He died last Saturday.
He turned on the gas, and he went to sleep,
with windows closed, so he'd
never wake up...
And all the people said, "What a shame
that he's dead. But..."

1. Do you think Mrs. Rierdan really knows him? Why?
2. Why is he considered "peculiar?"
3. Because a person is alone or quiet, does that mean he is peculiar? Why?
4. Was it really a shame he died?
5. Were "all the people" sincere about his death? Why?

MUSIC

SOUNDS OF SILENCE / Simon & Garfunkel

Hello darkness, my old friend
I've come to talk with you again
Because a vision softly creeping
Left it's seeds while I was sleeping.
And the vision that was planted in my brain
Still remains within the sound of silence.

In restless dreams I walked alone:
Narrow streets of cobblestone
'Neath the halo of a street lamp.
I turned my collar to the cold and damp
When my eyes were stabbed by the flash of a neon light.
It split the night and touched the sound of silence.

And in the naked light I saw 10,000 people, maybe more:
People talking without speaking, people hearing without listening,
People writing songs that voices never shared...
No one dared disturb the sound of silence.

Fool said, "Aye, you do not know:
Silence like a cancer grows.
Hear my words that I might teach you,
Take my arms that I might reach you.
But my words, like silent raindrops, fell
And echoed the wells of silence."

And the people bowed and prayed
To the neon gods they made.
And the sign flashed out it's warning
In the words that it was forming
And the sign said:
"The words of the prophets are
written on the subway walls
and tenement halls
And whispered in the sound of silence."

1. Why is the author talking to 'darkness'? Why is it an "old friend"?

2. Can you imagine what the 'sound of silence' might be like? What does it mean to you?

3. Do you ever feel frustrated when people won't listen to you? Have you ever felt foolish when you "reached out" to someone? Why?

4. What do the "neon gods" stand for? Do you have any?

5. Pick out words that show loneliness. Why is "loneliness" to important to people?

The following long term activities (pp. 26 through 40) are designed to be used as mean of looking at oneself.

What's In A Name? is a short worksheet adapted from ideas included in Jongeward's Born To Win.

Jonathan Livingston Seagull is a short worksheet appropriate for use after a student reads the book or listens to the record.

Two Ideal Days, Cave In, Obituary and Epitaph are adapted from Simon's Value Clarification.

The Facade is a short evaluation suited for use following the reading of Cole's book The Facade. (This book is most useful for non-readers or low-readers).

Leo Beuerman is a short worksheet designed to follow film viewing of Leo Beuerman. The film is a product of Centron Corp., Inc.

WHAT'S IN A NAME - A Sense of Identity Name_____

1. Write your full name in the space below.

2. If you don't have a middle name, do you know why? Explain.

3. If you have more than one middle name, do you know why? Explain.

LOOK AT YOUR FIRST NAME. THINK ABOUT IT FOR A MOMENT, THEN ANSWER THE FOLLOWING QUESTIONS.

4. Who named you? Do you know why they named you? Do you know why they choose the name they did?

5. Were you named after someone else? (A relative or famous person). If you were, did that name hold special expectations for you? (Were you expected to live up to something about that person?)

6. Do you like your name? _____

7. Is your name so common that you have felt like part of a mob? _____ Explain if you wish.

8. Is your name so uncommon that you have felt odd in a group?_____ Explain if you wish.

9. FEMALES: How do you think you would feel if your parents had named you Bobby or Jo?

MALES: How do you think you would feel if your parents had named you Carrol or Gale?

10. Were you ever called a name that invited ridicule?_____ Explain if you wish.

11. Do you have a nickname?_____ How did you get it?

12. Are you called one name at home and another name at school?_____ Explain if you wish.

13. What name do you prefer to be called?

14. How do your names, or nick names, influence your self image? (the way you look at yourself)

WHAT'S IN A NAME - A sense of Identity (continued)

15. Would you rather have a different name? _____
Why?_____
Would it be worth the trouble to get it legally changed?

16. If you had to name a son today, what name would you give him?_____

If you had to name a daughter today, what name would you give her?_____

Explain if you wish.

JONATHAN LIVINGSTON SEAGULL Name_____

1. How do you think it would "feel" to be able to fly like a seagull?

2. How is Jonathan like all the other seagulls?

3. How are you like all other people?

4. What makes Jonathan different from the other seagulls?

5. What makes you different from all others?

6. What do you like to do as much as Jonathan liked to fly?

7. How do you think it "feels" to be really free?

8. In Jonathan's world, what is heaven?

9. Why was Jonathan an Outcast?

10. Do you feel you could ever dedicate yourself to something as much as Jonathan was dedicated to flying?

What?

If not, why not?

TWO IDEAL DAYS Name_____

"Project yourself into the future, anytime from tomorrow to several years from now, and imagine two days that would be ideal for you. Imagine 48 hours of what for you would be the best possible use of that period of time. You can fantasize whatever you want; the only limit is the time limit of 48 hours.

Write about your perfect, ideal two days. Talk about where you could be, what you would be doing, who else might be there, and so on. Try to picture what you would be doing for the full 48 hours. Go into as much detail as you can picture in your fantasy -- smells, sounds, the weather, if they play a part."

CAVE IN

Teacher Directions Most students do have at least a vague idea of what they would like out of life. However, rarely do they have opportunities to compare, clarify and solidify their ideas. Education for life requires that teachers assist students in this area. The following exercise is altered and adapted from Larry Krafft, Department of Psyco-Educatinnal Processes, Temple University. It can be done verbally (after considerable group trust is built) or it can be done in written form early in the year.

Assignment The teacher should explain the following simulated situation to students:

Our class is on an outing to some near caves. We have been trapped hundreds of feet below the ground by a cave-in. There is a narrow passageway leading up and out of the cavern where we are trapped. Night is coming fast and there is no one around for miles to help. We decide that we will form a single file and try to work our way out of the cave. But at any moment there might be another rock slide. Those people nearest to the front of the line will have the best chances for survival. Each one of us should be able to give reasons why we should be at the head of the line. Our reasons can be of two kinds: What we want to live for; what we have not yet gotten out of life that is important to us or what we have to contribute to others in the world that would justify our being near the front of the line.

Variations:

1. Students can be asked the same questions but allowed to choose their place in line and explain it.

2. Students can be asked to verbally explain their reasons to fellow classmates. The class as a whole could then determine the order by which they would file out. (This approach could only be used if a great deal of group trust existed)

3. Students frequently enjoy hearing explanations and justifications made by fellow classmates. Portions of written explanations and justifications can be shared with the class if the teacher reads them anonymously.

THE FACADE Name_____

The Facade says a lot about seeing ourselves as we really are. Our facade has a lot to do with "open-ness" and other people. Read the book -- think awhile --- and communicate your thoughts about it.

LEO BEUERMAN Name_____

How would you describe the kind of life which Leo Beuerman led?

What important things did Leo Beuerman have to say about his life?

Describe Leo Beuerman self-concept.

Compare Leo Beuerman's self-concept to your own.

TEACHERS DIRECTIONS:

THIS GAME IS DESIGNED TO: (Do not tell students this until the game is over.)

- Show students how effectively they cooperate in a communication situation with fellow classmates and --
- Show students that non-verbal communication is possible although perhaps frustrating.

INSTRUCTIONS

1. Have students form groups of 6. (Five participants and one observer)
2. Instruct students that verbal communication will not be allowed.
3. Take observers outside the room for their instructions.
   A. They are to observe how the group works - for example:
      - How students communicate with one another.
      - How students cooperate with one another
      - How students react when they are finished, but other members of their group are not.
      - How students react when everyone in their group is finished but they are not.
4. As observers are passing out pieces, instruct the class:
   A. They may not talk or make any verbal sound.
   B. They may not point
   C. They may not take
   D. The only form of communication can be giving a piece to another person.

EVALUATION

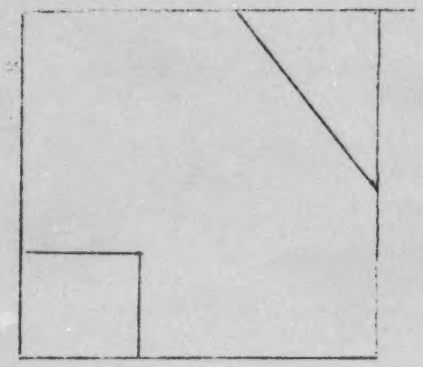
Once students have their squares completed, class discussion can begin.
1. Was this non-verbal communication difficult? Frustrating? Why? or Why Not?

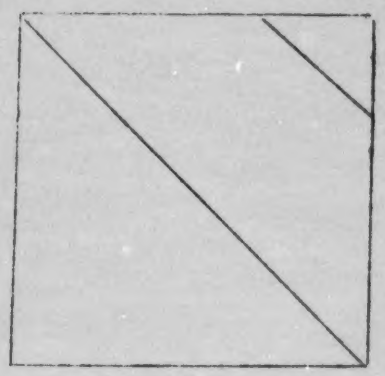
2. Did everyone in your group cooperate with other members? Equally? Why? or Why not?

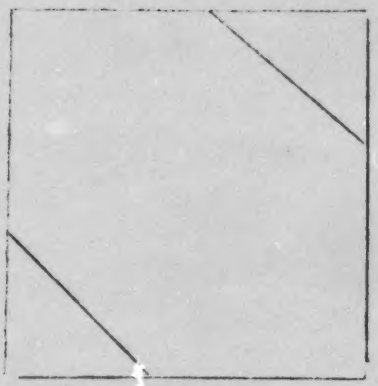
3. What did the first one finished do? How did the other members of the group feel?

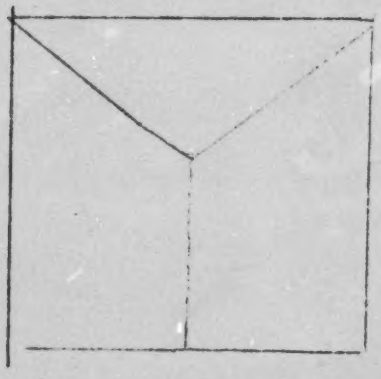
4. What did the last one finished do? How did the other members feel?

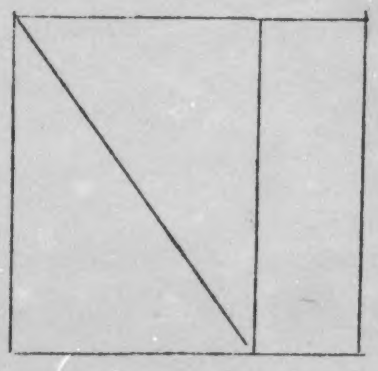
* The observers comments should be of particular importance, during the evaluation, since members of the group may have been unaware of their interaction while the game was in progress.











OBITUARY

Teacher Directions: Give students the following directions. Write your own obituary as if you were to die today. You can use any form you wish. Most obituaries include items such as the examples listed below:

James Clark, age 15, died yesterday from....
He was a member....
He is survived by....
At the time of his death he was working on becoming....
He will be remembered for....
He will be mourned by ..... because....
The world will suffer the loss of his contributions in the areas of....
He always wanted, but he never got to....
The body will be....
Flowers may be sent....
In lieu of flowers,....

Variations:

1. Have students read their obituaries to the class or share them in small groups.
2. Write your obituary as if it would appear in the school newspaper.
3. Write your obituary as you believe it would appear in a local newspaper ten - fifteen years from now.

Note: Some students may well need verbal supportative help in this exercise. Most would profit from teacher remarks on their papers.

EPITAPH

Teacher Directions:

Explain to students that epitaphs are simply inscriptions on tombstones. One might ask students if any of them have ever walked through a cemetary and read the inscriptions. Give instructions to students that they are to write their own epitaph. It should represent ones life in just a few short words. Perhaps it would have illustratinns or decorations. The epitaph should be drawn out to that tombstone shape and type of lettering is visible.

Considerations:

1. A sample or two may be helpful for students to look at.

2. A handy book of quotations may be helpful to some students as long as it does not stifle their own creative effort.

3. Students should be encouraged to share their epitaphs with classmates.

4. The teacher should have one ready to share with the class.

WHAT'S YOUR PREFERENCE? Name_____ 38. (1)

A. Which do you like best?
   1. winter in the mountains
   2. summer by the sea
   3. autumn in the country

B, Which would you rather be?
   1. an only child
   2. the youngest child
   3. the oldest child

C. Which would you least like to be?
   1. very poor
   2. very sick
   3. disfigured

D. Which would you most like to improve?
   1. your looks
   2. the way you use your time
   3. your social life

E. Pretend you are married and have your own family. Your mother has died and your father is old. What would you do?
   1. invite him to live in your home
   2. place him in a home for the aged
   3. get him an apartment for himself

F. You are well off financially and you inherit $10,000. What would you do?
   1. put it all in a savings bank
   2. invest it all in the stock market
   3. spend it all

G. Which would be your job preference?
   1. hard and dirty work at $80 per week
   2. clean and easy work at $40 per week
   3. dirty but easy at $60 per week

H. Whic do you like best?
   1. jello
   2. pie
   3. ice cream

I. Whom do you like least?
   1. a shoplifter
   2. a drug pusher
   3. a confidence man

J. Which would you least like to be?
   1. deaf
   2. an amputee
   3. blind

K. If you were stranded on a deserted island which would you rather have with you?
1. the Bible
2. the complete works of Shakespeare
3. the history of civilization

L. If you were with your family in a boat that capsized far from shore and there were only one life preserver would you
1. save your wife or husband
2. save one of your children
3. save yourself

M. Which would you least like your son or daughter to do?
1. marry out of necessity
2. marry outside of his/her race
3. smoke marijuana once a week

N. Which would you like to take a course in?
1. sex education
2. race relations
3. ecology

O Which best describes the way you handle money?
1. spend freely
2. always look for bargains
3. budget carefully

P. Which do you think is worse?
1. to become (or get someone) pregnant (unwed)
2. to be dependent on hard drugs
3. to date someone from another race

Q. Which do you least like to do?
1. get up in the morning
2. go to bed at night
3. keep your room neat

R. Which would be hardest for you to do?
1. show a bad paper to your parents
2. walk away from a fight
3. wait your turn when you have something exciting to say

S. What kind of person do you least like to sit next to? Someone who--
1. talks a lot
2. looks at your paper
3. can't sit still

T. Which animal would you like to be?
1. tiger
2. monkey
3. snake

U. Where would you prefer to sit?
1. near the window
2. near the door
3. in front of the room

V. Which would be hardest for you?
1. to admit you told a lie
2. to tell someone you broke his window
3. to admit you cheated

W. What is hardest for you to do?
1. be quiet
2. talk in front of the group
3. talk to the teacher

X. If you were to be born with a great gift, which would you prefer ?
1. a beautiful singing voice
2. great artistic ability
3. skill with your hands

Y. Which is most important?
1. to work hard for your future
2. to love others
3. to really know yourself

The following self evaluation activities (pp. 42 - 53) are intended to quite simply be self evaluation tools.

How Do You Feel About Work? is a Cal Young (Springfield, Oregon) developed activity.

The Self Esteen Inventory is adapted from Coopersmith's text The Antecedents of Self-Esteem.

The Maturity Questionnaire is an inventory assessment from Barron's Teen-age Sex Counselor. It is an excellent lead into a class discussion on maturity and responsibility. "If you have answered all questions in A, B and E with yes and all questions in C and D with no you are making good progress toward becoming an adult."

FIND YOUR OWN INTERESTS Name_____

I. What does the school record show?

A. Average grades in English___Math___Science___and in Social Studies___.

B. Two favorite school subjects and give average grade for each:

1._____Grade____ 2._____ Grade_____

2. School activities (sports, plays, club work, etc.) are important:

A. Favorite School activity_____

1. It is interesting because_____

_____

2. Major offices held, if any, in this organization_____

_____

B. Another favorite school activity is_____

because it_____. Offices held in that organization have been_____

C. Other school activities that would be nice to be a part of are:

_____

3. Three favorite hobbies outside of school are: 1._____

2._____ 3._____

4. The skill that I feel best qualified to perform is_____

_____

5. The course of study or special training that appeals most to me is

_____

6. I have been told by my_____ that I was especially good at

_____ and _____

7. Member of my family and/or friends have suggested a career as _____ to me, and I feel it would be _____

8. The work I would really like to do for a living is _____ _____. Why? _____

9. Members of my family who have done this kind of work are _____ _____

10. My parents urge me to complete at least ____ years of school.

11. Their schooling consisted of grade school, _____ and _____

12. I have held part-time and/or summer jobs as 1. _____ 2. _____ 3. _____

I like job number ___ the best. Job number ___ paid the best.

It seemed I was most useful and learned the most on job _____

13. Reading:

A. My favorite newspaper is _____. The part I enjoy most is _____

B. The magazines I read most often for pleasure are: 1. _____ _____ 2. _____ and 3. _____

C. The book I most recently read for pleasure was _____ _____. That was _____ months ago.

14. The TV (or radio) programs I prefer are: 1. _____ 2. _____ and 3. _____

MY ABILITIES Name_____

ACTIVITIES	What Do I Do Well?	What I Have Accomplished So Far . . .	I Am Good At This Activity Because . . .
HOBBIES			
SCHOOL SUBJECTS			
SPORTS			
COMMUNITY (Church, Clubs, volunteer work)			
SCHOOL ACTIVITIES (Projects, Clubs, etc.)			
OTHER TALENTS			

HOW DO YOU FEEL ABOUT WORK? Name_____

Circle the letter which corresponds closest to how you feel about these statements:

A Agree N Neutral D Disagree

A N D 1. All young people need to work to learn the "real value of money."

A N D 2. Parents expect their children to be interested in the occupations they (the parents) like or approve of.

A N D 3. It would not be acceptable to me to go into an occupation with no chance for advancement.

A N D 4. A wealthy person still needs to work to feel worthwhile.

A N D 5. Only a few very lucky people enjoy their work.

A N D 6. A man's whole life revolves around his work.

A N D 7. A woman's life can revolve around her occupation.

A N D 8. A woman's place is in the home.

A N D 9. I would not feel right being financially supported by my parents after I am 21.

A N D 10. I would not feel right being financially supported by the government after becoming an adult. (welfare or unemployment)

A N D 11. I am concerned about what type of work I will do.

A N D 12. The choice of one's work is one of the most important choices in one's life.

A N D 13. When an adult is out of work, he really begins to question his worth as a person.

A N D 14. One of my main concerns is to get a high paying job.

A N D 15. I could accept the idea of the set up where the man stays home and takes care of the kids and the house while his wife is the breadwinner.

A N D 16. I expect to work until I retire at 60 - 65.

A N D 17. I am aware of the job opportunities that are available to me.

A N D 18. Most adults I know work only for money.

HOW DO YOU FEEL ABOUT WORK? (continued)

A N D 19. In this society at this time one of my choices (a real possibility) is for me to not have a job.

A N D 20. In my community it is becoming more acceptable for boys to be artists, musicians, or craftsmen.

A N D 21. I would have to work to feel like I was contributing to society.

A N D 22 If you make enough money to provide food, clothing, and shelter, you would be satisfied with your job and not try to move to a higher paying job with more prestige.

A N D 23. The work that you do at 25 is probably the same type of work that you will do at 45.

A N D 24. Society places greater value on work that contributes to the welfare of people such as a social worker, than it places on work that produces a product such as a mill worker.

A N D 25. After establishing myself in one job I would change jobs in order to continue to be challenged.

A N D 26. An adult that changes jobs often is considered unstable or immature by society.

A N D 27. Individual work done with one's hands is the most personally rewarding work.

A N D 28. I want to have a better paying job than my parents.

A N D. 29. I want to have a higher status job than my parents.

A N D 30. The people I work with are more important to me than the actual jobs I perform.

A N D 31. I know enough about myself to be able to choose the type of work I would be successful in.

A N D 32. I don't feel I have to decide on one occupation to do for the rest of my life — I want to have different types of jobs throughout my life.

A N D 33. Work is something that you spend time doing and you may or may not get paid for doing.

A N D 34. Crafts and making things with your hands are becoming more popular but they will remain hobbies and not become actual jobs which people earn their living by.

HOW DO YOU FEEL ABOUT WORK? (continued)

A N D 35. If the United States goes to a guaranteed annual income, I would choose to stop working.

A N D 36. Most people would work at a paying job even if they didn't have to support themselves by working.

A N D 37. If a healthy man doesn't work, he is classified as lazy, worthless, or a parasite by American society.

A N D 38. Most persons work only to earn money to do the things they enjoy doing in their leisure time.

A N D 39. All persons have an obligation to work at a job that contributes to society.

A N D 40. If people weren't working, they wouldn't know what to do with themselves.

A N D 41. Women have more freedom in their choice of work because they can just do what they want, whereas, men must worry about getting a job that will support their families.

A N D 42. Hippies are just taking time out from living mature, productive lives. They will eventually settle down.

A N D 43. The purpose of all education is to give people skills that they will need for meaningful employment in the future.

A N D 44. If I were assured of a job that I would enjoy doing and could make a living at, I would quit school before high school graduation.

A N D 45. Teachers, counselors and school courses are among the most important influences in my decision of choosing a job.

A N D 46. School only prepares people to go to college.

A N D 47. I feel there is a direct relationship between how well I do in school and how well I will do when I start working.

A N D 48. The purpose of high school education is not job training but training in how to understand and adjust to life in such a complex society as ours.

A N D 49. I understand the relationship between what I am learning in school now and the kind of person I'll be in the future.

A N D 50. High School students are under a great deal of pressure to decide what type of occupation they will go into.

HOW DO YOU FEEL ABOUT WORK (continued)

A N D 51. School is to young people as work is to older prople -- drudgery.

A N D 52. It is more important that a man get job training than a woman.

A N D 53. I have an idea about the type of work I want for the rest of my life.

A N D 54. Preparation for a better job is the only reason to go to school after high school.

A N D 55. High schools could be improved by making them more directly related to job training.

A N D 56. It is important for the future of my family to have two cars, a boat, and a big house.

SELF-ESTEEM INVENTORY Name_____

Please mark each statement in the following way:
If the statement describes how you usually feel, put a check in the column, "Like Me."

If the statement does not describe how you usually feel, put a check in the column "Unlike Me".

There are no right or wrong answers.

	Like Me	Unlike Me
1. I spend a lot of time daydreaming.	_____	_____
2. I'm pretty sure of myself.	_____	_____
3. I often wish I were someone else.	_____	_____
4. I'm easy to like.	_____	_____
5. My parents and I have a lot of fun together.	_____	_____
6. I never worry about anything.	_____	_____
7. I find it very hard to talk in front of the class.	_____	_____
8. I wish I were younger.	_____	_____
9. There are lots of things about myself I'd change if I could.	_____	_____
10. I can make up my mind without too much trouble.	_____	_____
11. I'm a lot of fun to be with.	_____	_____
12. I get upset easily at home.	_____	_____
13. I always do the right thing.	_____	_____
14. I'm proud of my school work.	_____	_____
15. Someone always has to tell me what to do.	_____	_____
16. It takes me a long time to get used to anything new.	_____	_____
17. I'm often sorry for the things I do.	_____	_____
18. I'm popular with kids my own age.	_____	_____
19. My parents usually consider my feelings.	_____	_____
20. I'm never unhappy.	_____	_____

SELF-ESTEEM INVENTORY (continued)

	Like me	Unlike Me
21. I'm doing the best work that I can.	_____	_____
22. I give in very easily	_____	_____
23. I can usually take care of myself.	_____	_____
24. I'm pretty happy.	_____	_____
25. I would rather play with children younger than me.	_____	_____
26. My parents expect too much of me.	_____	_____
27. I like everyone I know.	_____	_____
28. I like to be called on in class	_____	_____
29. I understand myself.	_____	_____
30. It's pretty tough to be me.	_____	_____
31. Things are all mixed up in my life.	_____	_____
32. Kids usually follow my ideas.	_____	_____
33. No one pays much attention to me at home.	_____	_____
34. I never get scolded.	_____	_____
35. I'm not doing as well in school as I'd like to.	_____	_____
36. I can make up my mind and stick to it.	_____	_____
37. I really don't like being a boy - girl.	_____	_____
38. I have a low opinion of myself.	_____	_____
39. I don't like to be with other people.	_____	_____
40. There are many times when I'd like to leave home.	_____	_____
41. I'm never shy.	_____	_____
42. I often feel upset in school.	_____	_____
43. I often feel ashamed of myself.	_____	_____
44. I'm not as nice looking as most people.	_____	_____
45. If I have something to say, I usually say it.	_____	_____
	_____	_____

SELF-ESTEEM INVENTORY (continued)

46. Kids pick on me very often.	_____	_____
47. My parents understand me.	_____	_____
48. I always tell the truth.	_____	_____
49. My teacher makes me feel I'm not good enough.	_____	_____
50. I don't care what happens to me.	_____	_____
51. I'm a failure.	_____	_____
52. I get upset easily when I'm scolded.	_____	_____
53. Most people are better liked than I am.	_____	_____
54. I usually feel as if my parents are pushing me.	_____	_____
55. I always know what to say to people.	_____	_____
56. I often get discouraged in school.	_____	_____
57. Things usually don't bother me.	_____	_____
58. I can't be depended on.	_____	_____

MATURITY QUESTIONNAIRE

52
(1)

A. WHAT DO YOU THINK ABOUT YOURSELF?

/ /Yes / /No 1. Do you believe that you are a good, fine person?

/ /Yes / /No 2. Do you recognize that you have certain abilities and capacities?

/ /Yes / /No 3. Do you make a continuous effort to live up to the limits of these abilities and capacities?

/ /Yes / /No 4. Are without jealousy toward those whose abilities and capacities seem greater than yours?

/ /Yes / /No 5. Do you take pride in numbering them among your friends?

/ /Yes / /No 6. Do you respect yourself?

/ /Yes / /No 7. Do you have pride in yourself without being proud?

B. WHAT DO YOU DO WHEN YOU SUCCEED?

/ /Yes / /No 1. Do you accept success with becoming humility?

/ /Yes / /No 2. Do you feel good about your success without being conceited?

/ /Yes / /No 3. Do other people share in your happiness over your success?

C. WHAT DO YOU DO WHEN YOU FAIL?

/ /Yes / /No 1. Do you assume the attitude that "this proves I'm no good?"

/ /Yes / /No 2. Do you quit or give up or stop trying?

/ /Yes / /No 3. Do you believe it is impossible that you can ever succeed?

/ /Yes / /No 4. Do you believe that you can not profit from a failure?

D. WHAT DO YOU DO ABOUT TENSION WORRIES?

/ /Yes / /No 1. Are you the only human being who has worries?

/ /Yes / /No 2. Do anxieties frequently upset you?

/ /Yes / /No 3. Do you fret when it will do you no possible good?

/ /Yes / /No 4. Does your stomach often feel as if it were tied up in knots or full of butterflies?

/ /Yes / /No 5. Are you afraid to talk out your real feelings?

/ /Yes / /No 6. Do you let worries keep churning inside of you?

/ /Yes / /No 7. Do you expect everyone to like you?

E. HOW DO YOU GET ALONG WITH OTHER PEOPLE?

/ /Yes / /No 1. Do you respect most, if not all, other people?

/ /Yes / /No 2. Do you do your share of the work in your own home?

/ /Yes / /No 3. Do you feel that your house is really a home?

/ /Yes / /No 4. Are you comfortable with most, if not all, people you know?

/ /Yes / /No 5. Do you make other people comfortable with you?

/ /Yes / /No 6. Are you getting over your shyness with the opposite sexed person?

/ /Yes / /No 7. Do you share in good times with both sexes?

/ /Yes / /No 8. Do you feel that you belong to your crowd?

DECISION MAKING

Man becomes truly human only at the moment of decision.

Tillich

Not to decide is to decide.

Harvey Cox

A person's ability to choose, as well as his right to choose, is the essence of freedom. How well he learns the skills involved in the process of choosing well determines his power of self-determination, his freedom of choice.

Paul Woodring

DECISION MAKING

The average citizen would define decision making as the process of selecting from two or more possible choices. Such a definition, although true, is both narrow and naive.

Decision making is a complex process unique to man. It is a valuing, reasoning, solving and behavior directing process. Most importantly, decision making is a personal process.

We, at Roosevelt, believe decision making issues are the second embarking point of health education. To explain more thoroughly, every individual is confronted daily by decisions. These decisions can not be avoided; one can not escape from them. Since health education is, in fact, a cross disciplinary study and an applied field of learning which focuses on human concerns and values, 'deciding' is an essential base. 'Deciding' centered on the person and his environs implies both affective and action domains. When decision making operates with skill and relative ease, satisfaction will be reached and individuals will be moved toward purposeful behavior. Behavior of this type is certainly a suitable and desired goal of health education.

How then does a group of health educators set forth a plan to improve decision making skills?

First, by looking at ourselves: seeing that we are confronted daily with decisions; realizing that our decisions are sometimes clouded by value confusion; and by realizing that the process of valuing is in fact a process of constant growth.

Second, by looking at what we do know about students, we realize: students are confronted daily by decisions; they are frequently asked to

make decisions for which they have no clearly formed values; they are confronted through mass media by a multitude of diametrically appossed values; as persons they wish to make decisions regarding the purpose and direction of their own lives.

Third, by creating a real life environment with students. The environment should encourage questioning, confrontation, and a fair share of the decisions to be made and lived with. The environment should also encompass the elements of personal values, acquisition of information and practice.

> The making of decisions begins, first and foremost, with the individual --- by a recognition, evaluation and assessment of personal values. Since people are individuals who possess a variety of personal values, many times on the same topic or issue, the decision achieved will at times differ. Thus the individual person who is able to use personal clarity of values will make unique decisions suited to him or her.
>
> In addition to clarity of values, the process of decision making requires the acquisition of information. That is, acquisition in the form of (1) gathering information and (2) evaluating the credibility of information.
>
> And finally decision making requires the use of practice. Such practice should follow the course of identifying reasonable alternatives, appraising (or estimating) probabilities, or assumptions, ultimately choosing and subsequently evaluating.

These steps lay the groundwork for personal, human decisions. They are the methods of directly addressing ourselves to the issues and long time problems of health-related behaviors.

Some practical examples are:

1. Student written objectives at the beginning of each unit. This normally guarantees that class activities will be relevant. It also 'forces' students to accept responsibilities for their own education.

2. In-class environments are created in order to practice decision-making skills as they develop, (e.g. tobacco experiments, gambling, family experiments by creating 'classroom families')

3. Students are encouraged to utilize decision-making skills and valuing systems to resolve personal daily problems, (e.g. family and dating relationships, in-school difficulties).

4. Analysis and evaluation of products and services specific to health as ongoing techniques utilized throughout the course, (e.g. newspaper reports, advertising claims, consumer selection of across-the-counter drugs).

5. Students are encouraged to use the 'outside world' as a classroom specific to health careers, (e.g. identify resources available in the communities; ambulance services, VD clinics, Family Planning center.)

Information gathering is a primary step in the decision making process. When centered on a fact level it can easily become simply a matter of true or false, blank or completed answers.

The brief activities contained here, pp. 58 through 63, step slightly beyond the mere fact level. They provide students an opportunity to respond by utilizing both information and personal values. The valuing activities contained here are not designed to be heavily weighed. They are rather beginning points in the process of making decisions.

The 'I Want To Learn' sheet (p. 58) is designed to provide students an opportunity to set objectives for each unit. This is an information gathering tool for the teacher. It also insures that student goals will be met. Further it forces students to accept responsibilities for the education process.

Name _____
Period _____

My objectives for the COMMUNICATION unit:

1. I want to learn

2. I want to learn

3. I want to learn

4. I want to learn

Teacher Directions:

This simplified type of personal assessment allows students to: (1) identify what they eat, (2) pin point the circumstances surrounding their eating habits and (3) begin to evaluate the relationship between circumstances and food content and nutritional content.

Since food content and nutritional content is often dry material to cover the idea of utilizing 'circumstances' becomes a more interesting vehicle for introduction.

The teacher can simply introduce the project by explaining -- the reason for eating is basic; we need to eat to live. Each day, however, a wide variety of choices is presented to us as to what we eat and how we eat. For example, when was the last time you had an apple for lunch because you only had a dime? Or, when was the last time you ate lunch standing up either because that was what your group was doing or because you had no place to sit? Habits, customs, tastes and economics for the most part determine the ways we eat and our menus.

Procedure
For the next three days, record everything you eat and explain the circumstances surrounding the snack or meal. Use a piece of paper divided into three columns and leave the third, or far right column, blank. See the example below:

Food	Circumstances	
orange juice 1 piece of toast	late for school	
turkey dressing mashed potatoes squash cranberries pumpkin pie milk	our family always has turkey for thanksgiving	

Follow-up
When students return with their sheet for class evaluation and discussion the third element can be added. In the right column they need to mark which food group they used -- milk, meat, bread and cereal, vegetables and fruit, empty and extra. Empty (food containing nothing but calories; e.g. pop)

Extra (food containing more calories than anything else; e.g. chocolate pie).

NUTRITION I.Q. How much do you know? Name_____

True - False

____1. All diseases may be due to faulty diets.

____2. Soil depletion causes malnutrition.

____3. Our food supply is overprocessed.

____4. Many foods help prevent and treat diseases.

____5. Nutrients (food substances needed by the body for heat and energy, maintenance, building and repairing -- proteins, fats, carbohydrates, vitamin, minerals, water) are scattered throughout our food supply and need not be chemically added to food.

____6. People get more of a psychological (mind) benefit from vitamin pills than a physiological (body) benefit.

____7. One never outgrows the need for milk.

____8. The easiest way to lose weight is to skip meals.

____9. You are what you eat.

____10. There is a difference between hunger and starvation.

____11. Fruits and vegetables should be eaten raw.

____12. Margarine and butter contain the same number of calories.

____13. People on diets to lose weight should not drink water.

____14. Nutrition is the way the body uses food.

____15. There are six basic food groups.

____16. People who are on diets to lose weight should not eat bread or potatoes.

____17. By exercising people can lose weight.

____18. Muscle weighs more than fat.

____19. Vitamin D is produced in the body when the sun shines on the skin.

____20. Chocolate causes acne.

WHAT DO YOU WANT OUT OF LIFE? Name_____

Deciding what we want out of life and the kind of quality we want to put into life takes some thought on our part. This thought, and the answers that stem from it, is really based on our attitudes, beliefs and values which help make up our opinions about things (such as what we want out of life).

The kinds of choices we make about life are important and should be based on our values, because if they are not, then we would feel uncomfortable or uneasy about ourselves. Therefore, the first thing we have to do is to really be clear about what our values are.

Below is a list of 10 values arranged in alphabetical order. Your task is to arrange them in order of their importance to you as guiding principles in your life:

_____ A COMFORTABLE LIFE (a prosperous life filled with luxury)

_____ EQUALITY (brotherhood, equal opportunity for all)

_____ AN EXCITING LIFE (a stimulating, active life)

_____ FAMILY SECURITY (taking care of loved ones)

_____ FREEDOM (independence, free choice)

_____ HAPPINESS (contentedness)

_____ INNER HARMONY (freedom from inner conflicts)

_____ MATURE LOVE (sexual and spiritual intimacy)

_____ NATIONAL SECURITY (protection from attack)

_____ PLEASURE (an enjoyable, leisurely life)

_____ SALVATION (deliverance from sin, eternal life)

_____ SELF RESPECT (self-esteem)

_____ A SENSE OF ACCOMPLISHMENT (making a lasting contribution)

On the back side of the page then explain your top four choices

62
(1)

DRUG QUESTIONNAIRE Name _____

1. How would you define drug use?

2. How would you define drug abuse?

3. How might drug abuse affect one's future?

4. Why do people take illegal drugs in spite of laws against them?

5. Do you believe the government, through laws, has the right to control drug use by the private citizen?

   If your answer is YES, why?

   If your answer is NO, why not?

6. What might be some alternatives to drugs?

7. Is there a perfect drug?
If YES, what is it?

Why do you think it's a perfect drug?

If you don't think there is a perfect drug, why not?

Pages 65 through 70 are designed as skill builders. Page 65 presents a problem situation. Page 66 presents the same problem and shows students how a decision (in this case a problem solution) could be reached. Pages 67 - 70 represent sample situations for students to work through. Resource: Critical Issues in Health.

The Forced Ladder and Values Grid are excellent tools to assist students in ranking items and in clarifying their values. Both can be utilized in the classroom for discussion purposes; they help point up the idea that many people can reach different, valid decisions on the same issue.

Twenty Things I Love To Do is a Signey Simon strategy. If the last column is used for a drug inquiry it becomes a unique opening approach to drug discussion.

Masculinity and Femininity asks students to identify the five most important components of both males and females. Comparisons and rankings can then follow. This is an excellent introductory tool to sex role stereotyping.

I Can Make Things Happen is self-explainatory.

Alligator River and Fall Out Shelter are Sidney Simon strategies. Alligator River is most appropriate in a sexuality unit. The Fall Out Shelter is most appropriate in a personality unit.

NAME _____

SITUATION: John was discussing a problem with one of his classmates. He said, 'I am a heavy smoker but wish I could give it up because I feel my health might be in danger. It is a real habit with me and I wake up coughing most mornings and my chest constantly feels congested."

1. What do you think the best solution to this problem is?

2. Explain why you think your solution is best.

3. Explain step-by-step the way you solved this problem.

The purposes of problem solving questions are to provide you with an opportunity to systematically examine health problems. You will think these problems through clearly, and then propose solutions together with their justifications.

These are the terms which you will use:

1. Situation - a brief description or identification of a health problem.

2. Assumption- several statements suggested by the situation that can be considered true without verifying or examining.

3. Solutions - alternative solutions or decisions that can be considered to alleviate the problem.

4. Justification - reasons why the best solution is chosen.

SAMPLE PROBLEM:

1. Situation John was discussing a problem with one of his classmates. He said, "I am a heavy smoker but wish I could give it up because I feel my health might be in danger. It is a real habit with me and I wake up coughing most mornings and my chest constantly feels congested."

2. Define the problem (possible answer: The problem is for John to find out if his smoking has caused a respiratory health problem.)

3. What assumptions are made? (possible answers:
   a. John assumes there is a relationship between smoking and health.
   b. John assumes he is not a light or moderate smoker.
   c. John assumes his coughing and congested chest are due to his smoking.
   d. John's smoking habit is causing an emotional conflict.)

4. What are the possible solutions to this problem? (possible answers:
   a. Get a medical examination to rule out any serious health problem.
   b. Give up smoking completely.
   c. Have a chest X-ray.
   d. Learn more about the relationship between smoking and health.
   e. John can ignore his fears and accept the consequences of smoking.)

5. Choose the best solution and tell why it is justified. (possible answer: a. best answer. John should get a medical examination to rule out the possibility of a serious health problem. Since any smoking is injurious to health, John should either eliminate smoking or cut down on his tobacco consumption. The other solutions are important, but less urgent than getting a medical examination.)

1. DESCRIBE THE SITUATION: Catherine 'hitched' a ride with a fellow student in order to get home on time after school. There are two fellows, out of school, and three teenage girls in the car whom she does not know. The driver is far exceeding the speed limit, and she knows he had a few alcoholic drinks a short time ago.

2. DEFINE THE PROBLEM.

3. LIST THE ASSUMPTIONS:

4. LIST ALTERNATIVE SOLUTIONS:

5. CHOOSE THE BEST SOLUTION:

6. JUSTIFY YOUR CHOICE

7. EVALUATE YOUR CHOICE:

NAME _____

1. DESCRIBE THE SITUATION. John has just returned from his blind (arranged) date with Mary. John is speaking to his friend and says, 'Somehow I feel she didn't understand me and some of the things I was trying to say about myself. My understanding of her is not very good either because she never did say very much during the course of the evening. I like her but I doubt if she feels the same. Do you think she will go out with me again?'

2. DEFINE THE PROBLEM:

3. LIST THE ASSUMPTIONS:

4. LIST ALTERNATIVE SOLUTIONS:

5. CHOOSE THE BEST SOLUTION:

6. JUSTIFY YOUR CHOICE

7. EVALUATE YOUR CHOICE

Name_____

SITUATION: Bob is convinced that he deeply loves Susan. He feels she feels the same way towards him. She believes love is demonstrated by sexual relationships. He disagrees, but does not want to terminate the relationship. How should he resolve this conflict.

1. Describe the situation:

2. Define the problem

3. List the assumptions:

4. List alternative solutions

5. Choose the best solution

6. Justify your choice

7. Evaluate your choice

NAME _____

SITUATION: Your parents are elderly and able. They have lived in the same house for 40 years and it needs much costly repair to be made safe for them. You do not have the financial ability to repair the house for them. Also, the bathroom and bedrooms are upstairs. Your father is very deaf and your mother has a heart condition which makes stair climbing difficult. You feel you have some responsibility toward them and in this situation is a critical problem that must be resolved quickly. How are you going to solve the problem?

1. Describe the situation:

2. Define the problem:

3. List the assumptions

4. List alternative solutions

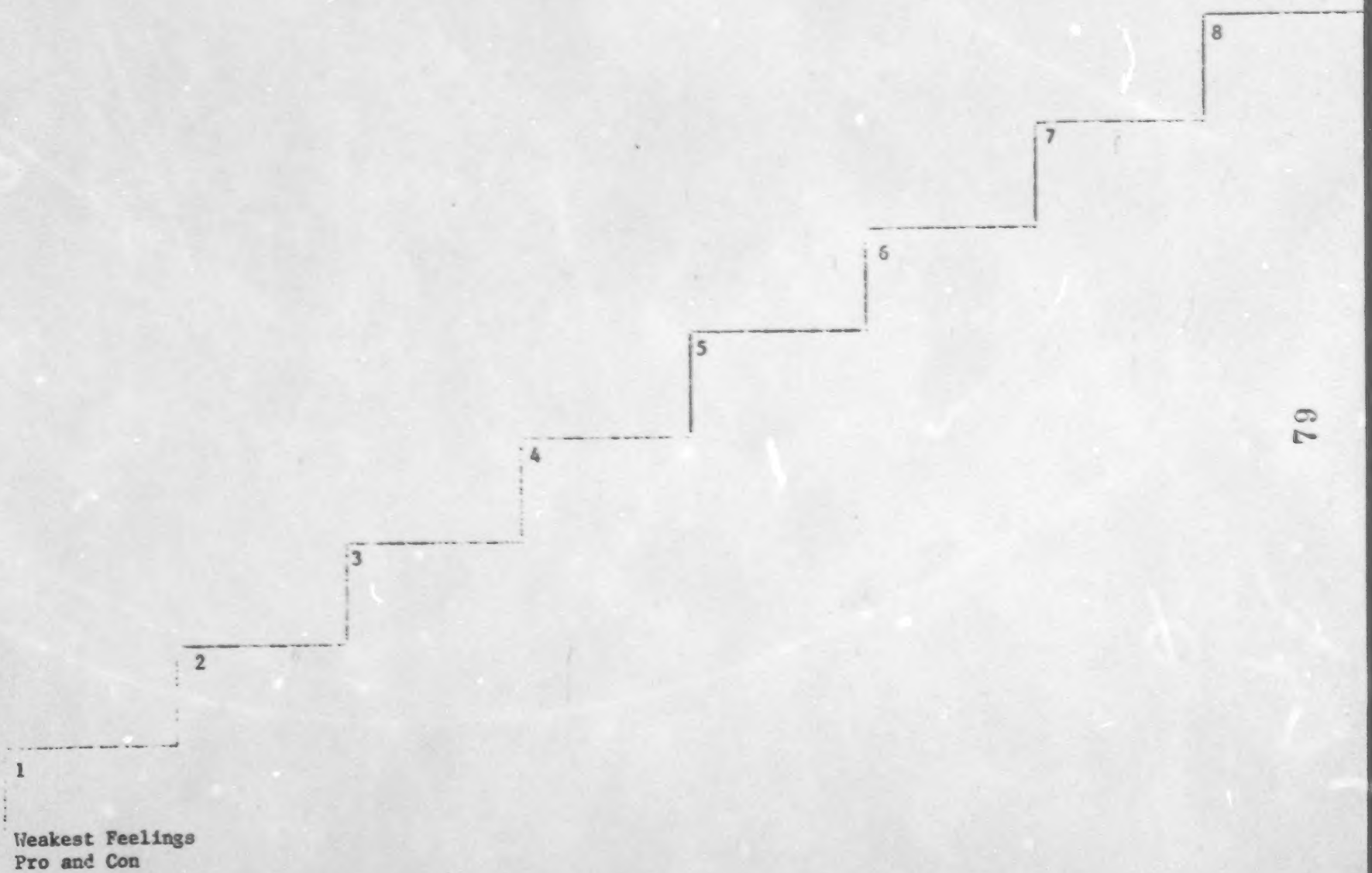
5. Choose the best solution

6. Justify your choice

7. Evaluate your choice

FORCED LADDER CHOICE

71



79

Ranking of Values Concerning the Sex Scene

1. Premarital sex is acceptable for the guys but not for the girls.
2. Unmarried pregnant girls should complete their pregnancies and have their babies.
3. Unmarried pregnant girls should have abortions.
4. Pregnant high school girls (unmarried) should be allowed to stay in their own high school throughout their pregnancy.
5. Families should be planned. They shouldn't just happen.
6. Premarital sex is acceptable if birth control methods are used.
7. Teachers who are embarrassed by students questions concerning sex and sexuality should not be teaching it.
8. When pregnancy occurs before marriage, the father is responsible for marrying the girl.
9. Sex education should be taught in the home.

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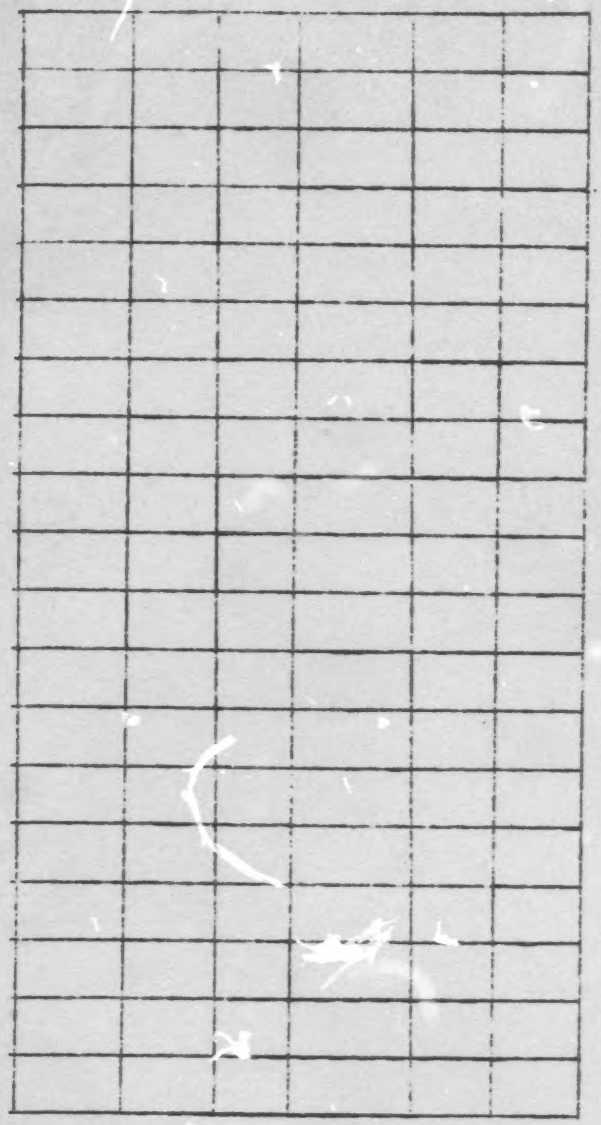
8. When pregnancy occurs before marriage, the father is responsible for marrying the girl.
9. Sex education should be taught in the home.

RANKING OF VALUES OR ATTITUDES

Instructions: Read accompanying statements, place the number of a statement in the box that best expresses how strongly you feel about that statement. <u>There</u> is to be only one number per box. Put a (+) if you feel positive, (-) if you feel negative about the statement.

7	4	1 (strongest)
8	5	2
9 (weakest)	6	3

TWENTY THINGS I LOVE TO DO:



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

MASCULINITY AND FEMININITY

/ / Male

/ / Female

		Rank
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

MONEY CAN MAKE THINGS HAPPEN Name_____

Emphysema
Quackery
Population Control
Venereal Disease
Heart Disease
Leukemia
Kidney Disease
Planned Parethood
Arthritis
Health Education
Epilepsy
Cancer
Red Cross
Cerebral Palsy
Hunger and Poverty
Pollution Control
Drugs
Cystic Fibrosis
Tobacco
Alcohol
Health Service Clinics
Mental Health and Illness

We have discussed either in depth or briefly, all of the areas of health concern listed above. Each area is, in some way, involved in research, education and treatment. Each area needs and deserves money to continue their programs. Let us say you have $50,000.00 that you want and must give to one of these areas.

1. Which area would you choose?
2. Why do you think that particular area is most important?
3. How would you wish the people in that area to spend your money?
4. What are you hoping the money will do for others?

REMEMBER: The decision you are to make is a big one. It requires thought and consideration. It may be a decision you will face in the future.

ALLIGATOR RIVER

Teacher Directions: Alligator River gives students an opportunity to react to characters in simulated situations. At first the stories appear to be 'make believe'; as students begin to evaluate their attitudes and ideas -- Alligator River approaches realism. Read the stories to your students. A discussion can follow: students can do individual rank orders or group rank orders. Are both the X-rated and G-rated story the same???

X-RATED STORY

Once upon a time there was a woman named Abigail who was in love with a man named Gregory. Gregory lived on the shore of a river. Abigail lived on the opposite shore of the river. The river which separated the two lovers was teeming with man-eating alligators. Abigail wanted to cross the river to be with Gregory. Unfortunately, the bridge had been washed out. So she went to ask Sinbad, a river boat captain, to take her across. He said he would be glad to if she would consent to go to bed with him preceding the voyage. She promptly refused and went to a friend named Ivan to explain her plight. Ivan did not want to be involved at all in the situation. Abigail felt her only alternative was to accept Sinbad's terms. Sinbad fulfilled his promise to Abigail and delivered her into the arms of Gregory.

G-RATED STORY

Once there was a girl named Abigail who was in love with a boy named Gregory. Gregory had an unfortunate mishap and broke his glasses. Abigail being a true friend, volunteered to take them to be repaired. But the repair shop was across the river, and during a flash flood the bridge was washed away. Poor Gregory could see nothing without his glasses, so Abigail was desparate to get across the river to the repair shop. While Abigail was standing forlornly on the bank of the river, clutching the broken glasses in her hands, a boy named Sinbad glided by in a rowboat.

She asked Sinbad if he would take her across. He agreed to on condition that while she was having the glasses repaired, she would go to a near-by store and steal a transistor radio that he had been wanting. Abigail refused to do this and went to see a friend named Ivan who had a boat.

When Abigail told Ivan her problem, he said he was too busy to help her out and didn't want to be involved. Abigail, feeling she had no other choice, returned to Sinbad and told him she would agree to his plan.

When Abigail returned the repaired glasses to Gregory, she told him what she had had to do. Gregory was appalled at what she had done and told her he never wanted to see her again.

Abigail, upset, turned to Glug with her tale of woe. Slug was so sorry for Abigail that he promised her he would get even with Gregory. They went to the school playground where Gregory was playing ball and Abigail watched happily while Slug beat Gregory up and broke his glasses again.

FALL OUT SHELTER

Class Directions

"Your group are members of a department in Washington, D.C. that is in charge of experimental stations in the far out posts of civilization. Suddenly the Third World War breaks out and bombs begin dopping. Places all across the glove are being destroyed. People are heading for whatever fallout shelters are available. You receive a desperate call from one of your experimental stations, asking for help.

It seems there are ten people but there is only enough space, air, food, and water in their fall-out shelter for six people for a period of three months -- which is how long they estimate they can safely stay down there. They realize that if they have to decide among themselves which six should go into the shelter, they are likely to become irrational and begin fighting/ So they have decided to call your department, their superiors, and leave the decision to you. They will abide by your decision.

But each of you has to quickly get ready to head down to your own fall-out shelter. So all you have time for is to get superficial descriptions of the ten people. You have half an hour to make your decision. Then you will have to go to your own shelter.

So, as a group you now have half an hour to decide which four of the ten will have to be eliminated from the shelter. Before you begin, I want to impress upon you two important considerations. It is entirely possible that the six people you choose to stay in the shelter might be the only six people left to start the human race over again. This coice is, therefore, very important. Do not allow yourself to be swayed by pressure from the others in your group. Try to make the best choice possible. On the other hand, if you do not make a choice in a half-hour, then you are, in fact choosing to let the ten people fight it out among themselves, with the possibility that more than four might perish. You have exactly one half hour."

Ten sample people:

1. Policeman with a gun (they cannot be separated.)
2. Olympic athlete (all sports)
3. Sixteen year old girl (a high school drop out; pregnant with questionable I.Q.)
4. An architect (homosexual)
5. A clergyman (seventy-five years old)
6. A thirty-nine year old prostitute (retired for our years)
7. A twenty-six year old make law student
8. The male law student's wife (she is twenty-five and has spent the last nine months in a mental hospital; she is still heavily sedated; she refuses to be separated from her husband)
9. A thirty-six year old female physician (unable to have children)
10. A forty-six year old male violinist (served seven years for pushing narcotics; has been out of jail for the last six months.

Practical Applications pp. 80 - 176 are designed to set the decision making process in motion. The activities involve students in subject areas of personal concern to them and in areas of significant social health concern.

All activities which follow are teacher directed or guided. None are intended as independent projects.

The Body System worksheets included here, pp. 81 through 140, are not intended to be the only tool whereby a student gains access to such information. They are intended to accompany class discussion, experiments and resource readings.

Each worksheet includes a base of information on structure and function. Each worksheet includes specific information in the area of complication, problems, and in vocabulary building. Each worksheet further includes the health specialists and health care workers involved. In some cases information concerning health care equipment, tools and machines are also involved. These worksheets do give students a perameter in which to work. They have been designed with essentially the same format to assist in continuity.

Resources: Your Health and Safety
You Can Work in the Health Services
The Human Body (Milliken Transparency)
Personal and Community Health

CIRCULATORY SYSTEM

The function of the circulatory system is to carry food and oxygen to every cell in the body and remove wastes from these cells. This system is made up of the heart, blood, and blood vessels.

The three main parts of the circulatory system are the heart, blood and approximately 100,000 miles of blood vessels. The heart, receiving blood from veins, pumps blood to the lungs where an exchange is made - carbon dioxide for oxygen. The blood returns to the heart and is pumped to the body through arteries. Arteries carry blood away from the heart and connect with tiny blood vessels called capillaries. Capillaries carry blood to all parts of the body - skin, muscles, brain, bones, and etc. Capillaries unite to form large vessels called veins. The veins carry carbon dioxide and waste materials away from the body cells. Blood carrying CO_2 is bluish-red in color as it travels to the heart and lungs. After the CO_2 is exchanged for oxygen in the lungs, the color of the blood is bright red.

Blood testing - one of the physicians's most important tools:
One of the most important tests your doctor may use in detecting a health problem is the blood test. Many doctors send their 'lab' work out to a specialized laboratory. In these laboratories the hemocytometer method or an electronic particle counter will be used to count your white and red blood cells. Other blood tests are also useful to your physician in that they can detect infections, hemoglobin levels, antibodies or the presence of particular elements. Blood tests for example help the physician to determine whether you need thyroid or whether you may have mononucleosis.

Complications, Problems and Personnel:
Defects, disorders and diseases of the circulatory system are many. Anemia is one of the most common defects of the blood. Disorders of the blood vessels include arteriosclerosis, varicose veins and hemorrhoids. Diseasesof the heart come under three main types: 1. those associated with infection 2. those associated with high blood pressure and 3. those associated with diseases of the coronary arteries.

A person with heart disease needs moderation in physical effort, plenty of rest, sensible eating, a limited amount of smoking, if any, and the avoidance of infection and medical supervision.

An electrocardiogram is a personalized reading of an individuals heart functioning. The electrocardiogram is made on a machine called an electrocardiograph. The machine is frequently operated by a specialized electrocardiograph technician. Readings from the machine are used to detect heart disorders. The physician specialist in the field of diagnosing and treating heart disease is called a cardiologist.

A medical technologist, perhaps assisted by a lab aide, performs many tests such as sophisticated blood tests to aid the physician.

Review:

The heart is a double pump. The right side receives blood from the body and pumps it to the lungs for a fresh supply of oxygen. The left side receives the blood from the lungs and pumps it to all parts of the body.

The circulatory system consists of the heart, arteries, capillaries, veins and the lymph system. Arteries carry blood away from the heart. Veins carry blood back to the heart. Microscopic capillaries connect the arteries and veins and allow useful substances to pass through the capillary walls to supply the cells. Whole blood never leaks out into the tissues unless a blood vessel is injured, but some plasma and white blood cells escape from the capillaries to form the lymph that bathes your body cells and contains fresh supplies of food and oxygen.

Good posture, proper exercise, correct clothing, sufficient rest, and avoidance of bottled-up emotions will help to protect your heart. Your heart and your 100,000 miles of blood vessels have great reserve power and can perform duty throughout a long lifetime.

To help you understand the circulatory system, define the following words:

1. Antibodies
2. Aorta
3. Arteries
4. Auricle
5. Blood Pressure
6. Electrocardiogram
7. Compatable blood
8. Coronary
9. Hemoglobin
10. Pulmonary
11. Serum
12. Stethoscope
13. Stroke
14. Transfusion
15. Valve
16. Varicose Vein
17. Veins
18. Ventricle

The circulatory system is made up of the blood, the heart and three types of blood vessels; arteries, veins and capillaries. This system has two major functions: (1) to carry food, oxygen and other essential materials to all tissues of the body; and (2) to carry carbon dioxide and other cell wastes away from these tissues.

There are chiefly four main blood types - A, AB, B and O. These types of blood differ in chemical composition: they are determined by heredity, In transfusing blood from one person to another it is essential that the blood type of the donor be matched, or 'compatible' with that of the recipient. Exactly matched blood types are best. Sometimes however, it is impossible to locate exact blood types. Using the chart below and to the right, answer the following questions:

	Recipient	Donor
Type AB can receive blood from _____	A	A or O
Type B can donate blood to _____	B	B or O
Type A can receive blood from_____	AB	Any type
Type O can donate blood to_____	O	O

Use the blood typing experiment.

What type of blood do you have?
To what blood grou s can you donate?
From what blood groups can you donate?

Blood is composed of plasma, red corpuscles, white blood corpuscles and plateets. Describe each and explain their role.

1.

2.

3.

4.

Lymph is a colorless, watery fluid much like plasma. What role does it play in the circulatory system?

Blood tests are frequently used to determine a variety of conditions. Some of them are: (1) the number of red and white corpuscles - to determine the general state of health (2) the number of white corpuscles --- to determine the severity of infection (3) the amount of sugar - to detect disorders such as diabetes.

Blood, like all of the parts of the body is attacked by disease, Anemia is a deficiency of red blood corpuscles or a lack of hemoglobin in them.

What is hemoglobin?

What are the following types of anemia?

Iron deficiency (nutritional)

Pernicious

What are some symptoms of an anemic person:

1.

2.

3.

4.

What is Leukemia.

What is hereditary hemophilia?

The heart is the most powerful muscle in the body. It is cone shaped and is located near the middle of the chest cavity with its broad end (base) up and its pointed end (apex) down. It is about the size of a clenched fist.

Some circumstance or conditions can affect the functioning of the heart. Others are very minor in effect.

What is rheumatic fever?

What is a congenital heat defect?

Do you have or have you had any of the above? Has it made changes in your life necessary?

Arteries are thick-walled and elastic because they carry blodd away frpm the heart.

What type of blood is carried in arteries?

Do arteries lie below veins in body tissue or above?___ Why?

Veins are thin-walled vessels because they carry blood to the heart.

What type of blood is carried in veins?

Do veins lie below arteries in body tissue or above?_____ Why?

Capillaries are small microscopic vessels

What type of blood is carried in capillaries?

Why are capillaries so small?

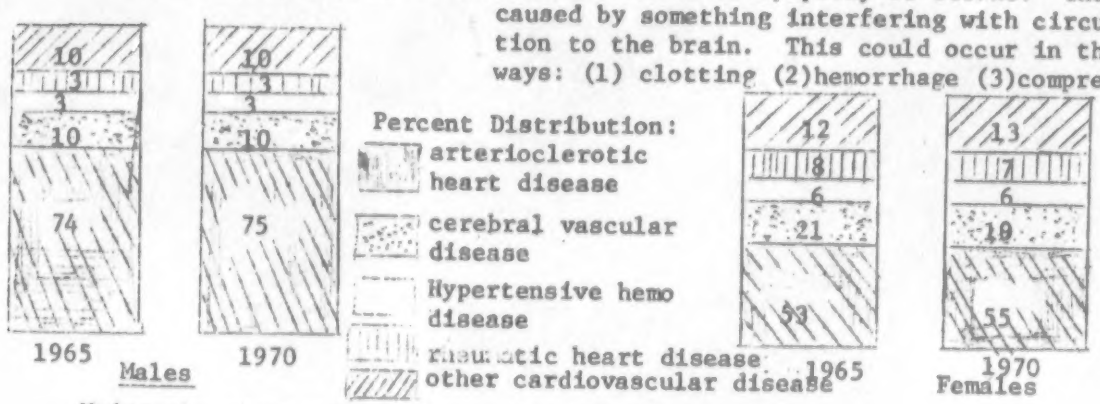
Cardiovascular diseases are ones which attack the heart and or the vessels. Cardiovascular diseases are the leading cause of death and the major cause of disability in the United States.

Arteriosclerosis: Means hardening of the arteries. In this condition arteries become less elastic and rigid. This slows down and impedes circulation.

Atherosclerosis: Means small deposits of cholesterol have developed on the artery walls. These deposits can either block the artery or injure the blood cells as they pass through. When these blood cells are injured they form a blood clot known as a 'thrombus'. If the thrombus breaks away it can circulate in the blood stream and block an artery.

Primary Hypertension: means that arteries remain in a state of constriction and therefore cause high blood pressure. Obesity and emotional upsets increase the chance of having hypertension.

Cerebrovascular Accidents: are also known as apoplexy or stroke. They are caused by something interfering with circulation to the brain. This could occur in three ways: (1) clotting (2)hemorrhage (3)compression.



Using the chart above answer the following questions:

Who has the greatest chance of having heart disease related to arteriosclerosis?_____

In what two areas do females outrate males?_____

In what one area do males outrate females?_____

Cardiovascular diseases can be prevented.

What are three warning signs?

1.
2.
3.

What three things can you do now to prevent developing cardiovascular diseases?

1.
2.
3

On Diagram 1:

1. Label the following parts of the circulatory system.
   (a) heart (b) arteries (c) diaphragm (d) aorta (e)veins (f)capillaries

2. To prevent the backflow of blood, veins have small_____ which arteries do not have.

3. _____are small tubes that carry blood to every part of the body.

On Diagram II:
Label the following:

(a) Aorta
(b) Pulmonary artery
(c) Right auricle
(d) Left Auricle
(e) Right Ventricle
(f) Left Ventricle
(g) Vena Cava
(h) Pulmonary Vein
(i) to body arteries
(j) to lungs
(k) from lungs
(l) Body Vein From Body

On Diagram III:

By looking at Diagram III identify the following:

(a) Help fight infection
(b) Most numerous of cells
(c) Release co_2 in lungs
(d) Gives blood its red color
(e) Helps form a network of fibers near wounds
(f) Liquid part of blood
(g) Formed in lymph tissue
(h) Smallest of blood particles.

CIRCULATORY SYSTEM

Illustration 1

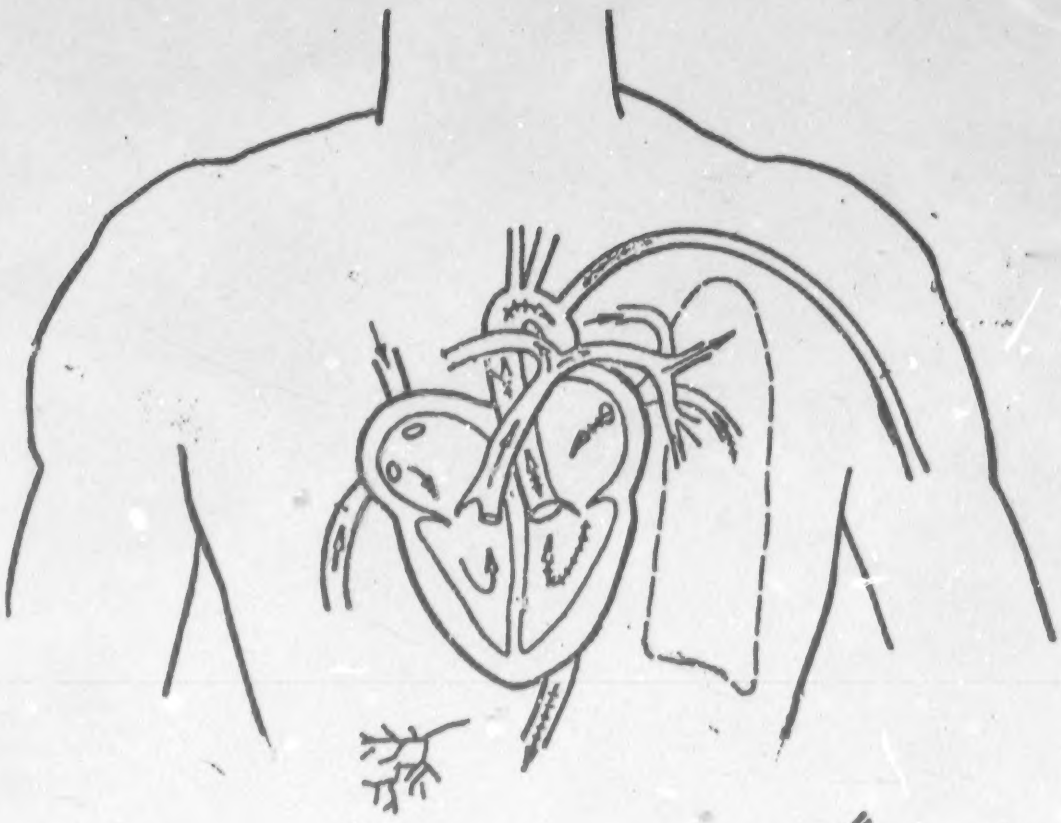
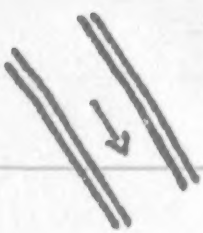


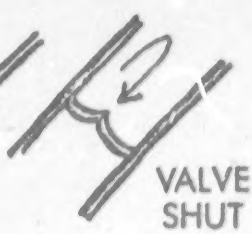
FIG. A



ARTERY —
Away from heart

CAPILLARIES —
Tiny network of blood vessels

VALVE
OPEN

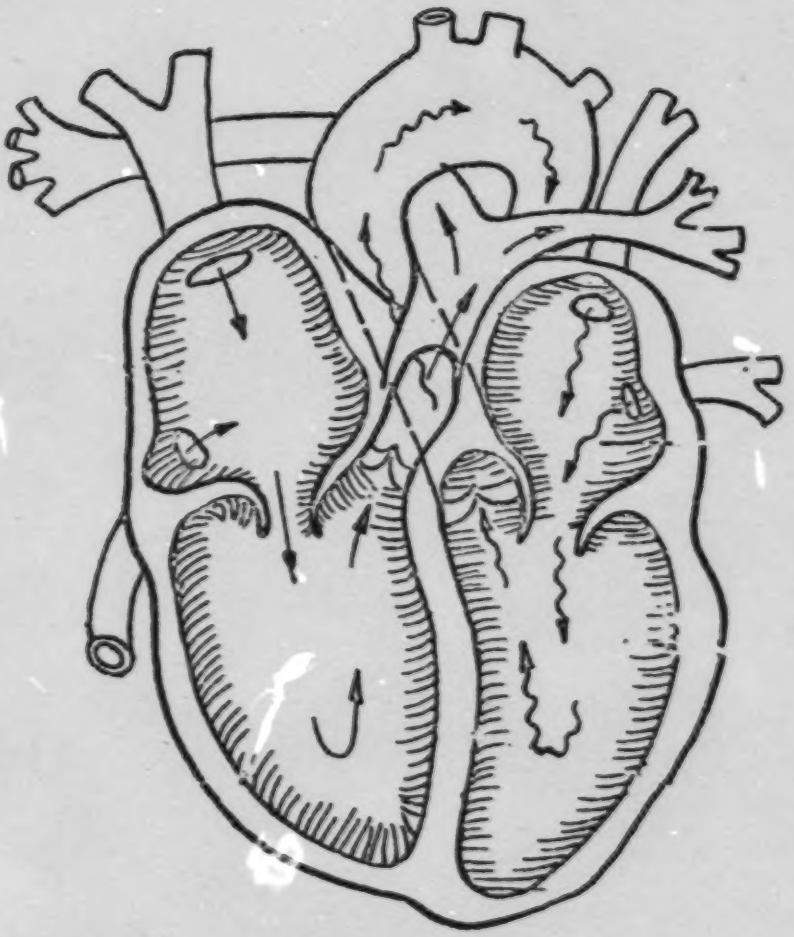


VALVE
SHUT

VEINS — To heart

HEART

Illustration 7



——→ = blood from veins ~~~→ = blood to arteries

BLOOD

Illustration 3

SIDE VIEW

RED BLOOD CELLS

5,000,000 per cubic millimeter
Carry oxygen and carbon dioxide
Manufactured in bone marrow

WHITE BLOOD CELLS

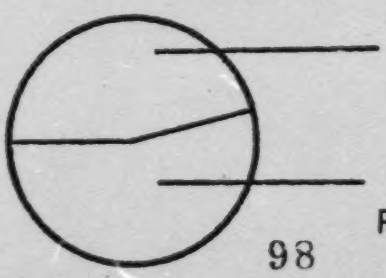
6,000 per cubic millimeter
Destroy bacteria
Manufactured in lymph nodes

BLOOD PLATELETS

300,000 per cubic millimeter
Help blood clotting
Formed from bone cells in bone marrow

FIG. A PARTICLES FOUND IN BLOOD
(A cubic millimeter is approximately the size of two pin heads.)

FIG. B PERCENT COMPOSITION OF BLOOD



DIGESTIVE SYSTEM

Digestion begins in the mouth. Food is bitten into small pieces and chewed by the teeth. The salivary glands add secretions to moisten the food. The tongue moves the food around and to the back of the mouth. After swallowing, a muscular tube, the esophogus, moves the food to the stomach. The stomach churns the food and mixes it with gastric juices which cause food chemicals to change. The small intestine receives the partially digested food. Here more digestive juices are added by the liver and pancreas. Digestion is completed in the small intestine. The villi of the intestine walls absorb the food material, and blood vessels carry it to all parts of the body. Wastes are removed by the large intestine. The rectum controls the release of solid wastes from the body. Wastes are removed by the large intestine. The rectum controls the release of solid wastes from the body.

COMPLICATIONS, PROBLEMS AND PERSONNEL

The avoidance of disorders and disease emphasizes the need for (1) a well balanced diet, (2) proper eating habits, (3) proper diet as for ones own needs, (4) control of ones emotions, (5) the use of good health procedures, (6) getting medical advice when needed.

1. Eat a good normal diet.

2. Be sure that you eat enough bulky foods, or roughage. Roughage, as you know, if food that has fibers in it that you cannot digest. (Too much roughage, however, sometimes makes constipation worse instead of better).

3. Have regular habits. This is important. The bowels can be trained. One should have a set time and enough time for the colon to act naturally.

4. Exercise the muscles of the abdomen. This helps stimulate normal peristalsis in the colon.

5. Take plenty of drinking water and other liquids. This will insure that you mix enough water with the solid parts of your food.

The digestive tract suffers from both disorders and diseases. Disorders are disturbances of function and the structures remain essentially normal. Digestive disorders include constipation, diarrhea, halitosis, and indigestion. Diseases and inflammations such as ulcers, colitis, gastritis, enteritis, hepatitus and appendicitis involve a definite change in the organs or tissues. Medical advice may be needed in either conditions if symptoms are persistent or serious.

Since the digestive system is one of the largest body systems the disorders which are specific to it are most serious to the health. Indigestion is probably the most common. Generally it is caused by eating too much, eating too rapidly, poor chewing, diseased teeth or gums or emotional upsets. Indigestion symtoms are nausea, heatburn andflatulence (excessove gas).

An ulcer is an open sore in the lining of the digestive tract -- it can be located in the lower end of the esophagus, the stomach, duodenum or at the junction of the deudenum and jejunum.

The appendix is normally about two to six inches long. Sometimes it becomes inflammed and full of pus -- appendicitis. Symptoms are lasting pain in the abdomen, nausea and fever. If an appendicitis is suspected, never use a laxative or heat. Both may cause peritonitis. Contact a physician.

Laxatives may sometimes be needed and useful. However, making a habit of laxative use actually rushes food through the stomach and intestine and consequently prevents proper digestion and assimilation of food value. Excessive use of laxatives can in fact cause the colon to lose its elasticity and muscular strength. If constipation is persistent you should consult your physician.

A gastroenterologist is a specialist in the diagnosis and treatment of diseases of the digestive system.

A proctologist is a specialist who deals with the diagnosis and treatment of the colon, rectum and anus. The proctoscope is an instrument which a proctologist may use to examine the interior of the rectum.

A dietician is a specialist who directs the preparation of well-balanced and prescribed menus for individuals. An example might be salt free diets or high protein diets. Dieticians are frequently employed in areas where large numbers of persons are to be served -- hospitals, nursing homes, the military. Any school which has a cafeteria has many food workers, and one of these may be a dietitian or nutritionist.

Review:

Although limited digestion occurs in your mouth and stomach, most digestion and absorption occur in the small intestine. Enzymes from your mouth and stomach have already acted upon your food. Intestinal juice, bile, and pancreatic juice work on the food in the small intestine. When digestion is completed here, the digested foods are absorbed through the lining of the small intestine.

The appendix is of no known value, but it often causes serious trouble. If you have symptoms that lead you to suspect appendicitis, contact your doctor.

Digestion will go on best when you are calm, happy and not too tired. You should try to establish pleasant, relaxed conditions for yourself and others at mealtime. Worry, anger and fear hinder digestion.

Cooking makes some foods more digestible. It is not necessary with others, although it is wise to cook food that may contain germs. Be sure to wash thoroughly any foods that you eat raw.

To help you understand the digestive system define the following wprds:

Appendix

Chyme

Colitis

Colon

Constipation

Diabetes

Diarrhea

Dietician

Digestive Juices

Duodenum

Enteritis

Esophagus

Epigloitis

Feces

Gastric Juices

Gastritis

Gastroenterologist

Gullet

Halitosis

Hepatitis

Hypoglycemis

Laxitives

Matabolism

Pancreas

Peristalsis

Peritonitis

Proctologist

Proctoscope

Rectum

Saliva

Salivary Glands

Ulcer

Villi

DIGESTIVE SYSTEM

Man needs food to live--to acquire the energy necessary for life. In the human, food is digested in the alimentary canal which consists of the mouth, throat, esophagus, stomach, small intestine and large intestine.

What are the three parts of the alimentary canal in which the actual digestion of food occurs?

1.

2.

3.

Food is broken down in two ways--by mechanical action and by chemical action. Explain both actions.

1. mechanical action:

2. chemical action:

What muscle action makes it possible for humans to be able to eat and digest food in an upside down position?
Name and explain the action.

The stomach is a muscular pouch that can hold up to two quarts. There are three gastric juices in the stomach -- name them.

1.

2.

3.

What is an ulcer?

Which of the gastric juices causes ulcers?

Explain the total cause of ulcers (the chemical action of the gastric juice and any other things that lead to the cause of ulcers?

Explain what happens to shells when hydrochloric acid is dropped on them?

After the food has been processed in the stomach it moves into the small intestine which is a hollow tube about 20 feet long. Because it is so long it needs muscular support from the abdominal wall to prevent "a bulge". What are three things that can be done to strengthen these abdominal muscles to help keep a flat, trim abdomen?

1.

2.

3.

In order for food to support the body's needs it must first be digested and then absorbed by the blood stream which then carries the nutrients to all the cells of the body.

Through what wall does the absorption of digested food by the blood stream take place?

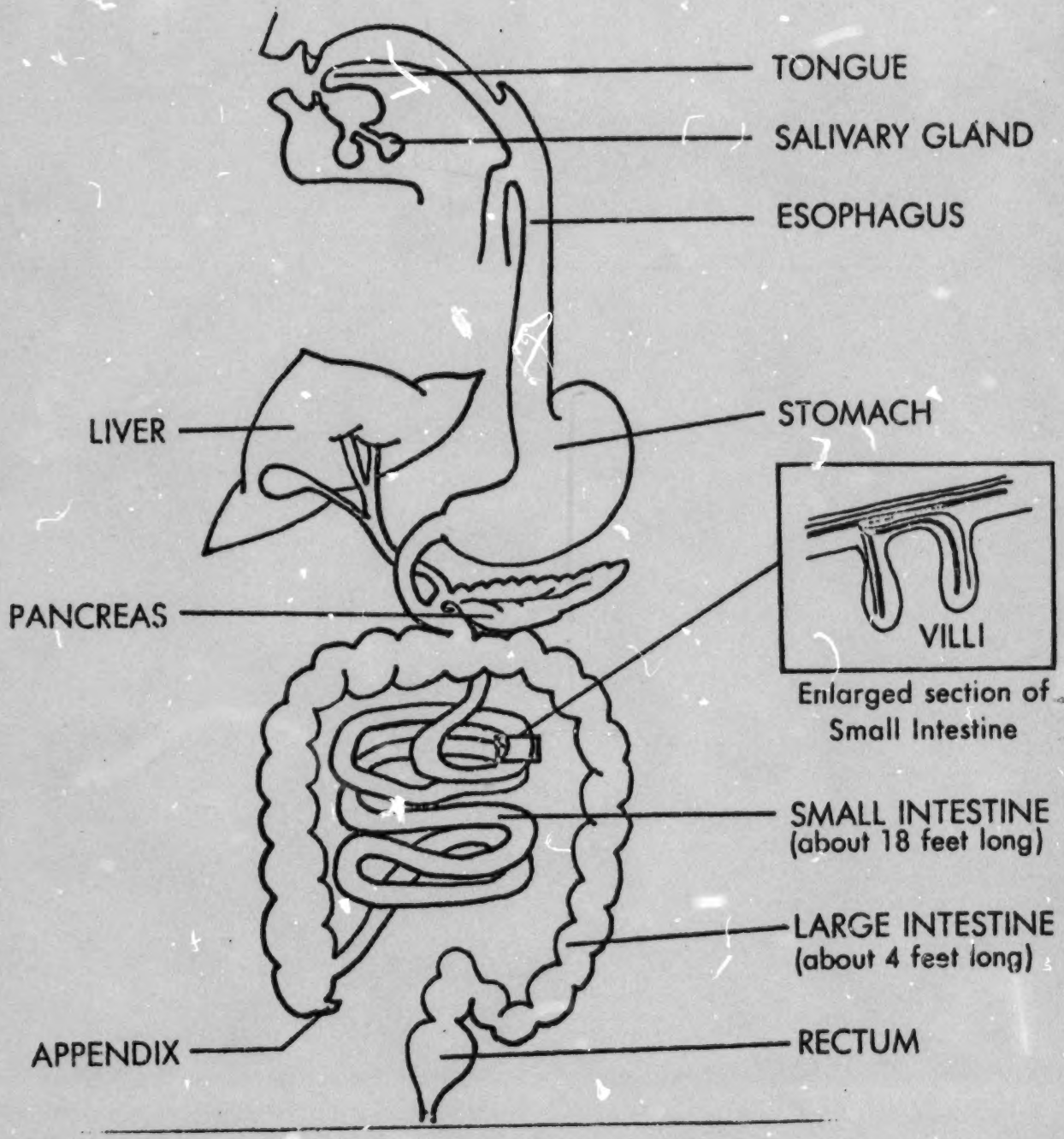
Can you explain how the shortening of this wall might aid a person who is extremely overweight?

The large intestine is the final section of the alimentary canal--what are the two functions it performs?

1.

2.

DIGESTIVE SYSTEM



ENDOCRINE SYSTEM - GLANDS

Glands are organs whose cells give off juices with chemicals that have special uses in the body. There are two kinds of glands: duct glands give off juices through tubes, and endocrine glands give off juices without tubes -- flow directly into the blood stream

Duct glands have openings through which pour out the juices they make and give off. These juices travel through the ducts or tubes to the part of the body they affect. Salivary glands in the mouth, sweat glands in the skin, the pancreas and liver are examples of duct glands. Endocrine glands (without ducts) produce chemicals called hormones. Since endocrine glands have no openings or tubes to release the hormones, the blood absorbs the hormones directly through cell walls. The blood stream carries the hormones to the parts of the body that they affect. The tiny pituitary gland, 'master gland of the body,' is found in the brain. It regulates the growth of the skeleton and body. The thyroid gland, located below the voice box in the windpipe, controls the speed or rate at which the body burns or uses food (metabolism). The Islands of Langerhans, found in the pancreas, regulate the use and storage of sugar in the blood. The adrenal glands, located atop the kidneys, help control digestion, regulate the balance of salt and water, and assist the body to meet emergency situations. There are many other glands within the body, but some have functions that are still unknown today.

HORMONES FOR THOSE WHO NEED THEM:

It is a good thing for us that many animals have glands much like those of man. Since these glands produce hormones like ours, we use some animals as a source of hormones for medical treatment. As an example, ground-up thyroid gland from sheep is a source of thyroxin for people whose thyroid gland is not active enough. We also use hormones of animals to find out the effect of too much or too little of the same hormones in our bodies. Many experiments have been performed with sheep and dogs. Curiosity concerning the reason why dogs died after their thyroid glands were removed -- even though they were given injections of thyroxin -- led to the discovery of the four vital parathyroid glands which lay hidden in the thyroid.

A good supply of hormones obtained from the endocrine glands of other animals is a great help to persons who lack certain of them. However, extreme care must be exercised in hormone treatment. Nothing about you is balanced with finer precision than the work of your endocrine glands, and nothing can ruin your life more quickly than mistaken juggling of the balance of the hormones that help control your physical and mental growth, your sexual characteristics, and your very life. Never -- under any circumstances -- try to treat yourself! Always consult a doctor.

COMPLICATIONS, PROBLEMS AND PERSONNEL

Heredity plays a part in certain glandular disorders. This is most clear in the case of diabetes, where a tendency toward the disease is inherited. Dwarfs have also occured in several generations of the same family.

The lack of proper food can make the glands function improperly. The thyroid cannot develop properly without enough iodine. Vitamin C seems to be needed to make cortisone and other hormones of the cortex of the adrenals.

Constant strain and stress, whether from disease, worry, exhaustion, or exposure, may injure the endocrine glands. A gland may fail to function well if overstimulated by any of these means over a period of time. The glands are stimulated normally: (1) by nervous impulses, as when anger or pain stimulates the adrenals or excitement affects the thyroid; (2) by chemicals in the blood, as when a pituitary hormone stimulates the adrenal cortex to make corisone.

Since the endocrine system exerts such a profound influence on all body functions specialists are often required for consultation, diagnosis and treatment. An endocrinologist specializes in the treatment of diseases arising from disturbances of the secretions of the endocrine or ductless glands.

REVIEW

Your endocrine, or ductless glands secrete hormones directly into your blood stream. A delicate balance in gland output is necessary for physical, mental, and emotinnal health, since your hormones affect your growth, mental efficiency, sexual maturity, muscle control, nerve stability, and the rate at which you oxidize the sugar in your blood.

Your endocrine glands are affected by your thoughts, by chemicals in your blood (either natural body chemicals or injected drugs,) by sensations from the skin and other sense organs, and by disease and injury. Continued overstimulation by stress or any other means may lead to poor functioning of the glands. The hormone balance may be upset by taking gland medicine or treatments. Never take such treatments except as advised by your doctor.

TO HELP YOU UNDERSTAND THE ENDOCRINE SYSTEM DEFINE THE FOLLOWING WORDS:

Adrenalin

Adrenals

Basal Matabolism

Cortisone

Cretin

Diabetes

Duct Gland

Estrone

Goiters

Hypoglycemia

Insulin

Islands of Langerhans

Parathyroids

Pineal

Pituitary

Testosterone

Tetany

Thymus

Thyroid

Thyroxin

Tell which gland is used:

a) a midget or giant_____

b) suffers from body overheating_____

c) constantly eating food but remaining thin_____

d) makes food soft for swallowing_____

e) suffers from diabetes (too much blood sugar)_____

f) need of sudden burst of power to win the race_____

TELL WHICH GLAND IS USED

a) a midget or giant_____

b) suffers from body overheating_____

c) constantly eating food but remaining thin_____

d) makes food soft for swollowing_____

e) suffers from diabetes (too much blood sugar)_____

f) need of sudden burst of power to win the race._____

The Islands of Langerhan is found within the _____gland.

Your endocrine glands and what they do. Fill in the correct answer:

Gland	Processes it regulates	Effects of regular excess of hormones	Effects of regular shortage of hormones
thyroid			
parathyroids			
adrenals			
pancreas			
pituitary			
sex gland			
thymus			

What is the largest gland in your body?

What is jaundice?

What are the four important kinds of liver enemies?

How can the doctor check to find out how active your thyroid gland is?

How can tetany be relieved?

What are the glands of combat?

What gland is called the master gland and why?

What gland is small when you are born but shrinks and becomes much smaller when you are an adult?

GLANDS

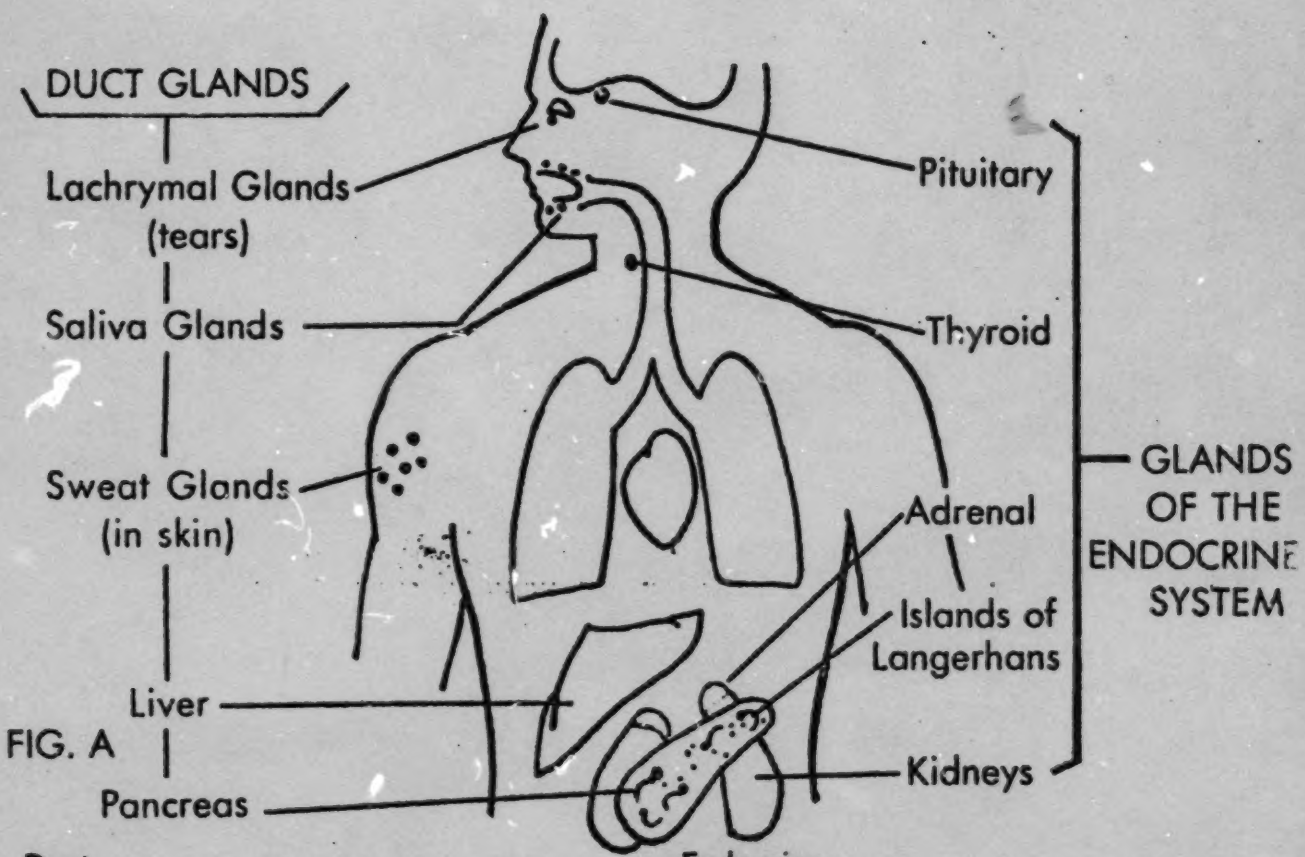


FIG. A

Duct Glands	Product	Function
Lachrymal	tears	clean eyes
Salivary	saliva	moisten food
Liver	bile	aid digestion
Pancreas	digestive juice	aid digestion
Sweat	perspiration	cool body

FIG. B

Endocrine Glands	Product	Function
Pituitary	various harmones	body size
Thyroid	thyroxin	rate of using food
Adrenal	adrenalin	extra strength for stress and emergency
Is. of Langerhans	insulin	regulates body sugar

EXCRETORY SYSTEM (1)

The fuction of the excretory system is to remove wastes from the body. The kidneys are the main part of the excretory system. Other organs in the body also remove wastes -- the lungs, skin and liver. The rectum of the large intestine removes food wastes that cannot be digested.

The main organs of the excretory system are the kidneys. The kidneys (two reddish-purple organs located in the lower part of the back) consists of millions of tiny tubes and cells. These tubes and cells withdraw liquid wastes from the blood. This waste is passed on to and stored in the bladder until it is released from the body. Getting rid of body wastes helps regulate body functions. As we breathe, the lungs remove carbon dioxide and water from the blood. The liver filters out solid particles of waste floating in the blood. The skin, through sweat glands, gives off perspiration, which contains water and some dissolved mineral salts. The large intestine, a part of the digestive system absorbs water from undigestible food wastes. This water is removed by the excretory system and solid wastes are moved along for release by the rectum. Proper foods, exercise, and good posture help the excretory system function properly.

CARE AND MAINTENANCE:

To keep the kidneys healthy, avoid infections, chilling, and undue exhaustion. Germs from other parts of the body may settle in the kidneys, just as they may settle in the lungs.

Drink plenty of water. The kidneys do not seem to be injured by the quantity of water that they have to eliminate, but they may be hurt by a large amount of wastes in only a little water. A healthy adult should drink from six to ten glassfuls a day, or somewhat less when other liquids are taken, too. You need more water when you perspire, or when you have a fever, a cold, or other disease in which the kidneys have to get rid of an unusual amount of wastes and poisons.

Don't try to doctor yourself by taking advertised kidney remedies. These may have no effect, and only a doctor could tell whether a certain drug would be likely to help in your case.

URINALYSIS--one of the physician's most important tools:

Among the most important tests given to everyone who takes a physical examination is the urinalysis, or anlysis of urine. This anlysis will usually show if there is any kidney disease, even in the early stages. It also helps to bring to light abnormal conditions in other parts of the body. This is because the liver, digestive organs, and spleen may cause changes in the blood and consequently in the urine. As a result, urinalysis often shows how these other organs are working.

Like all medical tests, the urinalysis needs to be studied by a physician who knows his patient. Sugar in the urine often indicates diabetes. Sometimes, however, sugar may appear because of excitement or of having recently eaten a large amount of sweets. Protein in the urine may mean infection or kidney disease, but sometimes it is found as a result

Urinalysis (continued)

of perfectly normal conditions. Cloudiness may be the result of infection, or it may merely show the presence of normal salts in the urine. Color may vary a good deal without indicating that anything is wrong. In any case, a urinalysis is an important part of a general physical examination, which adolescents and adults should have at least once a year.

COMPLICATIONS, PROBLEMS AND PERSONNEL:

The kidneys are often blamed for conditions which have nothing to do with them. Many backaches, for example, are due to muscular strains and sometimes to trouble in the backbone. However, anything that poisons the rest of the body is likely to injure the kidneys. Mercury, other poisons, large amounts of alcohol, and bacteria may damage the kidneys. The bacteria may come from infected tonsils, gall bladder, or teeth, from boils, or from diseases like scarlet fever. Hardening of the arteries and high blood pressure are both likely to lead to damage to the kidneys. It is hard to say, however, whether the kidney damage is due to these conditions or whether they and the kidney damage are both symptoms of an underlying disorder.

Sometimes, stones form in the kidneys. These may reach large size without pain if they stay in one place. They may cause great pain if they slip into the ureter and block the passage of urine.

A diseased kidney may have to be removed. If the other kidney is in good condition, the patient may live in good health to a ripe old age. In the same way, a large part of the liver may be removed without injury. As soon as the wound has healed, the liver cells start growing and dividing (provided there is no serious disease in what is left of the liver). Soon there is enough new liver tissue to carry on all of the liver's normal work.

A urologist is a physician who specializes in the study, diagnosis and treatment of diseases of the genitourinary tract. Your regular physician will send you to a urologist if he or she anticipates that a specific problem concerning your excretory system exists.

REVIEW:
Your life depends upon a fresh supply of blood all the time. The same blood is used over and over, but it is conditioned and guarded by the liver and kidneys (as well as by the lungs and skin).

The liver makes bile, stores food, destroys poisons, and prepares certain waste products so that the kidneys can get rid of them. The kidneys secrete urine in order to get rid of surplus water and wastes. They leave the proper amount of salt and other chemicals in the blood, and get rid of the surplus.

To protect your liver and kidneys, eat a properly balanced diet with enough protein and vitamins, drink enough water, and avoid infections and undue exposure. Have a urinalysis as a part of your medical examination every year.

To help you understand your urinary system define the following words:

1. bladder
2. excrete
3. kidney
4. liver
5. lungs
6. sweat glands
7. ureters
8. urethra
9. urinalysis
10. large intestine
11. urologist

Why is it important to drink plenty of water?

Why do we need roughage foods?

Using the illustration of the excretory system, tell which figure helps the body get rid of waste.

1. Perspiration is given off by_____
2. Carbondioxide and water vapor is breathed out through_____
3. This filters out solid particles in the blood_____
4. Liquid wastes are removed from the blood by the_____
5. Undigested solid foods are removed by the_____
6. Liquid wastes are stored until released from the body by the_____
7. These are connecting tubes between the kidney and the bladder._____

EXCRETORY SYSTEM

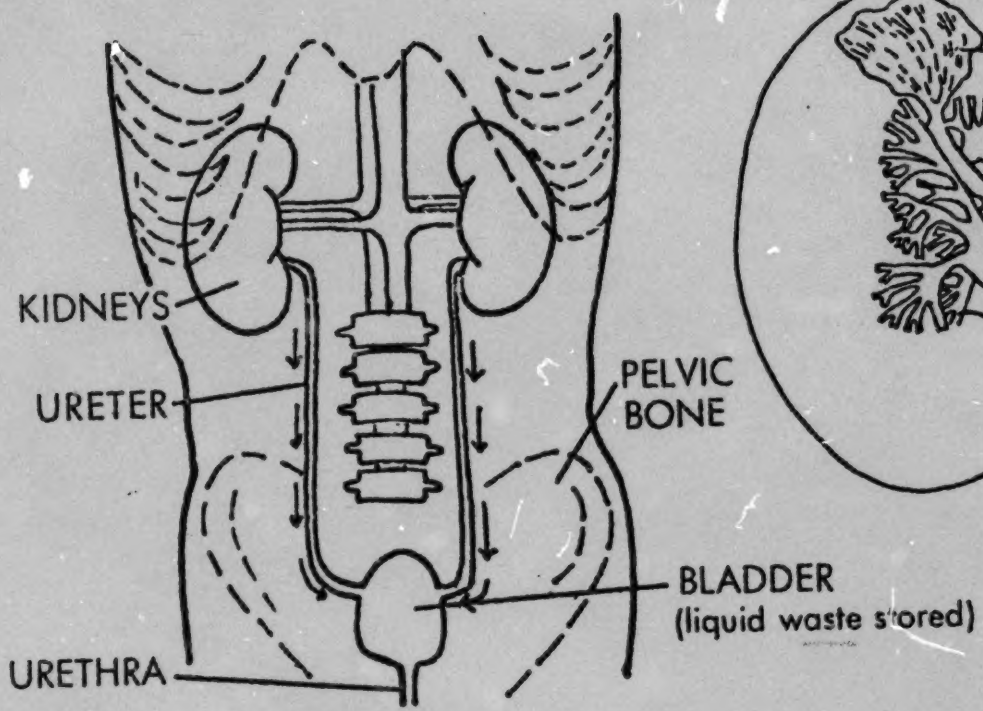


FIG. A. ORGANS OF THE EXCRETORY SYSTEM

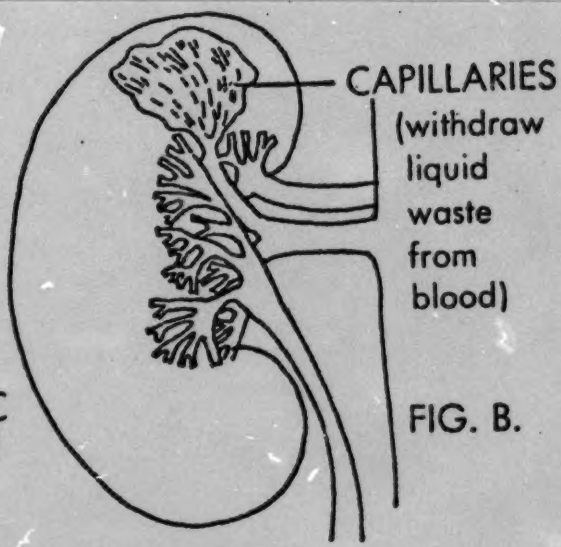


FIG. B.

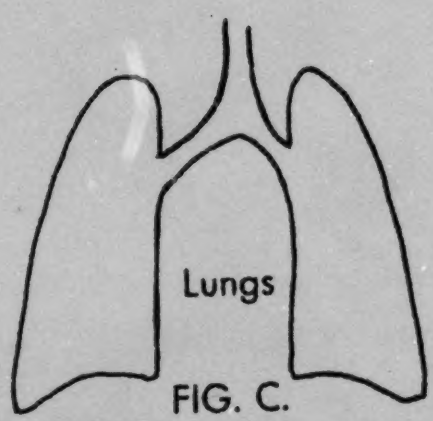
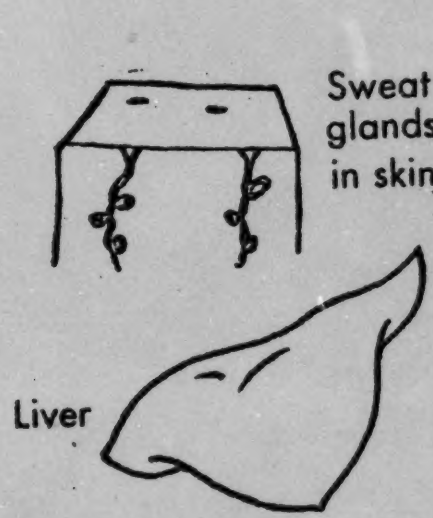
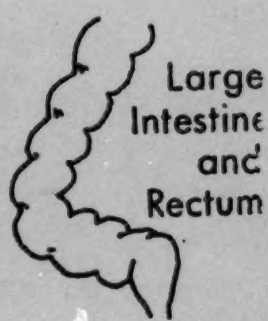


FIG. C.





MUSCULAR SYSTEM (1)

The muscular system is concerned with movement. Muscles, when stimulated by nerves, move our body. About one half of the body is muscle.

Muscles work in only one way -- they contract (become shorter and thicker). When muscles attached to bones contract, they pull on the bones and cause them to move. Most muscles work in pairs. There are two kinds of muscles-voluntary and involuntary. Voluntary muscles work when we want them to. The arm, leg, and neck muscles are examples of voluntary muscles. Involuntary muscles keep on doing their work whether we think about them or not. The heart, stomach, and intestines are examples of involuntary muscles. The work of some involuntary muscles such as the eyelids and diaphragm can sometimes be regulated. Through regular exercise, muscles increase in size and are ready for work.

Why Exercise?

You might answer, "I enjoy it." That's one good reason. Here are others:

1. Exercise strengthens the heart. A normal heart is weakened by lack of exercise.

2. It makes you perspire. This opens your pores and gives your heat-regulating mechanism a workout.

3. It increases circulation. This brings all of your cells the rich supply of food and oxygen they need.

4. It speeds up oxidation of fuel in the cells. This helps your appetite directly and your digestion indirectly.

5. It ventilates the lungs.

6. It strengthens your muscles. If you don't use your muscles, they grow weak; they may even shrink in size.

7. It trains your mind and body to act as a team. You learn to use your muscles with skill and grace.

8. It stimulates growth, if you don't overdo it.

9. It makes you feel better. It helps you to face your troubles and keep a cheerful outlook.

How can you gain all the benefits mentioned above? Choose activities to suit your likes and needs. Each person will have to decide just how vigorously and how long they should exercise. Anyone whose health is impaired should have his physician recommend the type and amount of activity.

These rules will help in selecting suitable activities:

1. The activity should be brisk and strenuous enough to speed your heartbeat and make you breathe faster.

2. The activity should never exhaust you. If it makes your heart pound and leaves you quite breathless, avoid it. These are warning signals. You make a serious mistake if you try to keep up with the other fellow when the effort overstrains you.

3. Your activities should use many muscles. The best are those in which you have to make many types of movements. Walking, jogging, running, swimming, and active games are especially good.

4. Exercise out of doors if you can. If you can't, make sure that you have good ventilation wherever you are.

5. Try to plan "carry-over" sports or activities that you will enjoy and continue to play for many years. Dancing, bowling, golf, tennis, skating, and swimming are good carry-over activities.

COMPLICATIONS, PROBLEMS AND PERSONNEL

Muscles are often strained, sprained and even bruised. Although these injuries sound minor it is not uncommon for a severe sprain to take as long or longer to heal than a bone break.

Muscular dystrophy is a neruological disease which causes a gradual wasting of muscle tissue. Most victims of this disease are children; many die before they reach adulthood.

Health care workers are available for patients with short term and long term muscle difficulties and diseases. Physical therapists work with handicapped children, temporarily injured persons, arthritis, stroke and heart patients and with the elderly in order to heal or to treat injuries and disabilities by physical means. The therapist uses heat, light, water, sound, electrical, exercise and energy saving techniques. Also working with licensed physical therapists are physical therapy assistants. Closely associated with the physical therapist is the occupational therapist. The occupational therapist assists in retraining skills required in areas such as work or recreation. Orthotists make and fit braces which help to support disabled limbs. Orthopedic surgeons work closely with muscle disease deformities and problems associated with bones. Sometimes a plastic surgeon may be involved in specialized cases.

REVIEW:
Everyone needs a daily program that includes a proper amount of physical exercise. Exercise is necessary for good circulation and good muscle tone; these, in turn, are essential to the health of every organ in your body. Your daily program of exercise should include "carry-over" activities that you will still enjoy later in life.

We have three types of muscle: (1)skeletal (2) heart (or cardiac) and (3) smooth. All your muscles have only one job: to cause movement. They work only by pulling; they never push.

The more oxygen your muscles get while they are working, the better and longer they can work. You will get more work done in less time and with less fatigue if you work rhythmically, work at a fair pace without hurry, maintain good posture, get plenty of fresh air, and take frequent short rest periods. With practice, you can learn to perform any activity with the least amount of effort.

To help you understand the Muscular Sustem define the following words:

1. Achilles tendon
2. Bicep
3. Bruise
4. Cranium
5. Diaphragm
6. Dislocation
7. Extensor
8. Flexor
9. Involuntary muscle
10. Ligament
11. Muscular dystrophy
12. Muscle cramp
13. Occupational thereapist
14. Orthotist
15. Periosteum
16. Physical therapist
17. Sinuses
18. Skeleton
19. Strain
20. Suture
21. Tendon
22. Tricep
23. Voluntary muscle

Muscle is a specialized type of tissue which can expand and contract like a rubber band. Because muscle tissue has this 'elastic' quality the body can move. The muscular system performs two other functions; (1) it protects internal organs and (2) it gives form and beauty to the body.

There are three types of muscle tissue.

1. Striated: which is found chiefly in the arms and legs; these muscles are called voluntary because they are under the control of our will.

2. Unstriated: which is smooth and is found chiefly in the walls of arteries, veins and the alimentary canal; these muscles are called involuntary because they cannot be controlled by our will.

3. Cardiac: which is found only in the heart.

What type of muscle makes your foot move?_____

Is cardiac muscle voluntary or involuntary?_____

What do you think would cause a voluntary muscle to twitch?_____

_____

What kind of muscle action is used in each of the following:

a, lifting

b. digestion

c. running

d blinking eyes

e. breathing

f. heartbeat

g. swallowing

h. singing

Activity, or lack of it: exercise, or lack of it, effect the condition of muscle tissue.

What is muscle tone?

Name two benefits of exercise on muscle tissue.

1.

2.

What precautions would be taken when exercising?

What is the object of physical fitness programs in schools?

What is the effect of labor saving devices upon muscles? (give examples)

Muscles are sometimes injured or damaged. Like other body tissues muscles sometimes become diseased.

What is a sprain?

What is a dislocation?

What is a strain?

What is a muscle cramp?

What is muscular dystrophy?

Using the arm muscles, as an example, answer the following questions.

Where is your bicep?

Where is your tricep?

What happens to the bicep when your arm extends?

What happens to the bicep when your arm flexes?

What happens to the tricep when your arm extends?

What happens to the tricep when your arm flexes?

Examine the chicken leg.

Find the muscle tissue, tendons and ligaments. Describe each as to texture, shape and color.

Muscle:

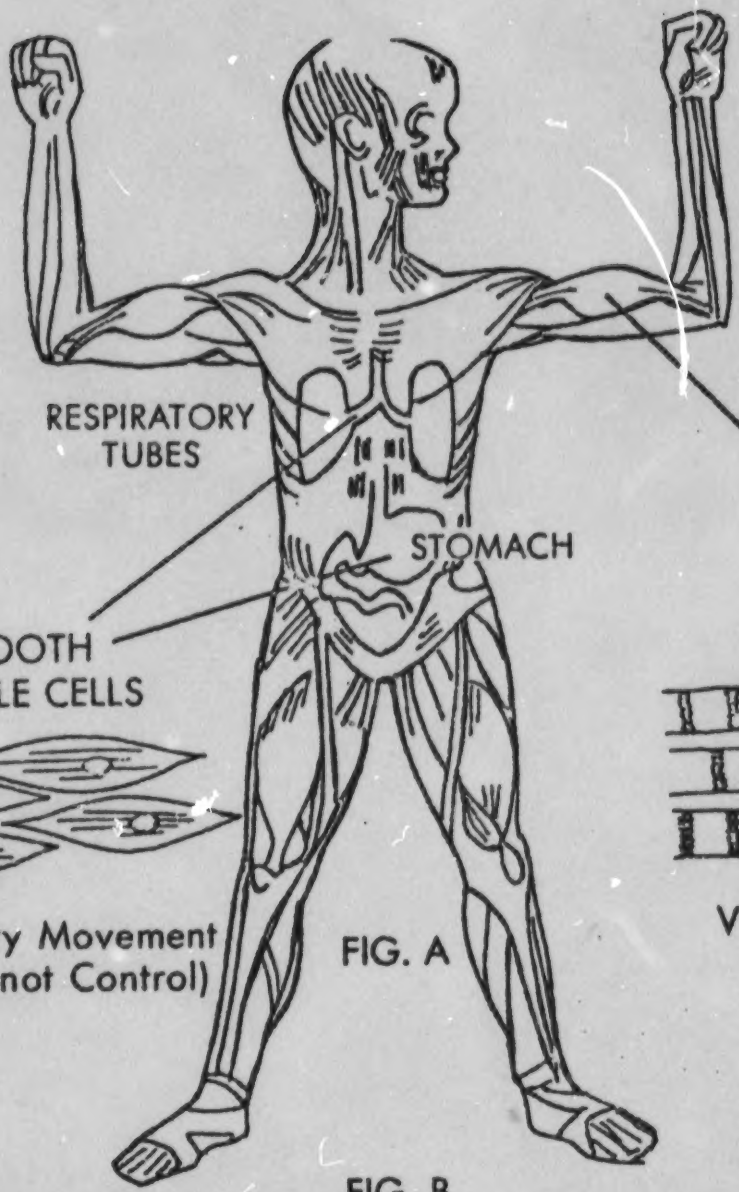
Tendons:

Ligaments:

Move the lower portion of the leg by pulling on first one tendon, then on the other. Describe what happens.

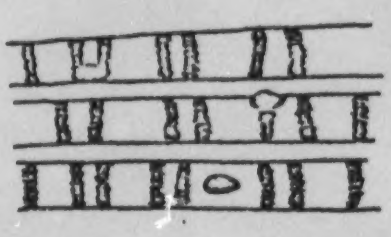
Move the leg, at the joint, from side to side. Ligaments are involved in joint action. What do ligaments have to do with this type of movement in the checken leg?

MUSCULAR SYSTEM



Involuntary Movement
(You Cannot Control)

FIG. A



Voluntary Movement
(You Control)

FIG. B

1. LIFTING _____
2. DIGESTION _____
3. RUNNING _____
4. BLINKING EYES _____
5. BREATHING _____
6. HEARTBEAT _____
7. SWALLOWING _____
8. SINGING _____

The nervous system enables us to react to our environment. The unit of structure of the nervous system is the neuron, the nerve cell.

The nervous system has two main divisions - the central nervous system and peripheral nervous system. The central nervous system consists of the brain and the spinal cord. The peripheral nervous system consists of the cranial (in head) and spinal nerves and the autonomic nerve structure. This structure serves the internal organs and controls such activities as digestion, circulation, respiration, excretion, reproduction, and endocrine gland activity. The parts of the nervous system are composed of neurons. Nerves are really bundles of axons.

Nerve Impulse Pathway:
The synapse is the gap over which a nerve impulse must pass. Reflex actions are the responses of the nervous system to stimulus. Reflexes may be involuntary or voluntary.

Stimuli are received by specialized structures known as receptors. Electrical and chemical changes in the neuron transmit the nerve impulse from the dendrite receiving and stimulation to the axon. The gap from the nerve endings of the axon to the dendrites of the next neuron is known as the synapse. The impulse is able to pass through this gap. The next neuron may pass on this impulse to another neuron or to a structure capable of reacting to the stimulus, such as a muscle or gland. These are known as effectors. This pathway of the impulse is known as the reflex arc. Some reflex actions such as breathing, pulling a hand away from a hot object, and digesting food are involuntary. Others are voluntary such as recognizing a printed word and being able to pronounce it.

COMPLICATIONS, PROBLEMS AND PERSONNEL:

Many infectious diseases produce injurious effect upon the nervous system. There are four diseases in which a virus attacks the nervous tissue specifically. They are rabies, poliomyelitis, encephalitis and meninigitis. Syphilis, a bacterial disease, can directly attack the nervous system in its late stages. Several other common disorders of the nervous system are epilepsy, multiple sclerosis and cerebral palsy, also Parkinson disease.

Medical personnel who work with the nervous system are many. Electroencephalograph technicians operate a machine called an electroencephalograph commonly known as an EEG. The machine records brain waves so that abnormalities and disorders can be detected.

An anesthesiologist is a doctor who specializes in administering anesthetics so that surgical patients can be put to sleep so that no sense of pain is felt. Certified nurse anesthetists also work in the area of administering an anesthetic.

Neurologists and specialized physicians who diagnose and treat diseases of the nervous system. Neurogurgeons diagnose and surgically treat the nervous system.

REVIEW:

You are "perfect" without practice -- in some ways. You were born with a set of built-in nerve pathways that help to make your body work just as it should -- without your knowing or thinking about it. Your built-in pathways are working for you now. Your conscious self couldn't attend to a fraction of the jobs that your nerves and the rest of your body carry on.

Your automatic reactions are called reflexes. Your nerve pathways for your reflexes are inborn. Simple reflexes take place without your thinking about them .

Your central nervous system consists of your brain and spinal cord (which is continuous with the lower part of the brain). The central nervous system sends nerves to your skeletal muscles and sense organs.

The parts of the brain that you should remember are the cerebrum, the cerebellum, and the medulla. You need your cerebrum to learn, decide, remember, speak, see and hear. The cerebellum controls balance and the way your muscles work together. You need the medulls in order to live at all, since it controls heartbeat, breathing, and other important functions.

Your autonomic system sends orders to your heart, your smooth muscles, and your glands -- all the organs over which you do not exercise conscious control.

To help you understand the nervous system define the following:

Anesthesiologist

autonomic Nervous System

Axon

Brain Waves

Central Nervous System

Cerebral Palsy

Dendrites

Electroencephalograph

Encephalitis

Epilepsy

Ganglia

Gray Matter (Cortex)

Meninigitis

Moter Nerve

Multiple Sclerosis

Nerve

Neuron

Neurology

Neurologist

Paraplegic

Poliomyelitis

Rabies

Receptors

Reflex

Reflex Arc

Sensory Nerve

Spinal Column

Spinal Cord

Stinulus

Synapse

NERVOUS SYSTEM - THE BRAIN

Our brain is the most complex, imaginative and smartest "think tank" ever created. Each of us has our own little "IBM" machine inside our skull that controls all of our thoughts and actions.

There are three major areas of the brain--what are they and what do they do?

1.

2.

3.

A fourth part of the nervous system is the spinal cord--what is its function?

We spend about one-third of our lives sleeping (20 out of 60 years) Why?

1.

2.

3.

4.

5.

Fatigue from over-work, either physical or mental, causes nerve cells to shrink so they will not work as they should. What might you do to prevent fatigue?

1.

2.

There are two systems at work in the nervous system--the <u>autonomic nervous system and the central nervous system.</u>

Which of the two systems (autonomic and central nervous sytem) controls the things you do of your own feee will?

What part of the total body do these nerves go to?

What areas of the body does the autonomic nervous system go to?

BODY

The nervous system is built up of microscopic nerve cells or neurons.

What are the two things that make up neurons?

1._____locate in the brain or spinal cord.

2. _____which lead to skin, muscles, bones and organs.

What does the central nervous system control?

Describe the impulse action from the eyes to the brain and back when you see something flying through the air toward your eyes.

1.

2.

3.

4.

Name one reflex we perform constantly.

What is the difference between a sensory nerve and a motor nerve?

1. Sensory:

2. Motor:

The meninges are membranes that cover the brain and spinal cord.

What is spinal meningitis?

Define neurology

What kind of a doctor is a neurologist?

What parts of the body might a neuro-surgeon perform surgery upon?

NERVOUS SYSTEM

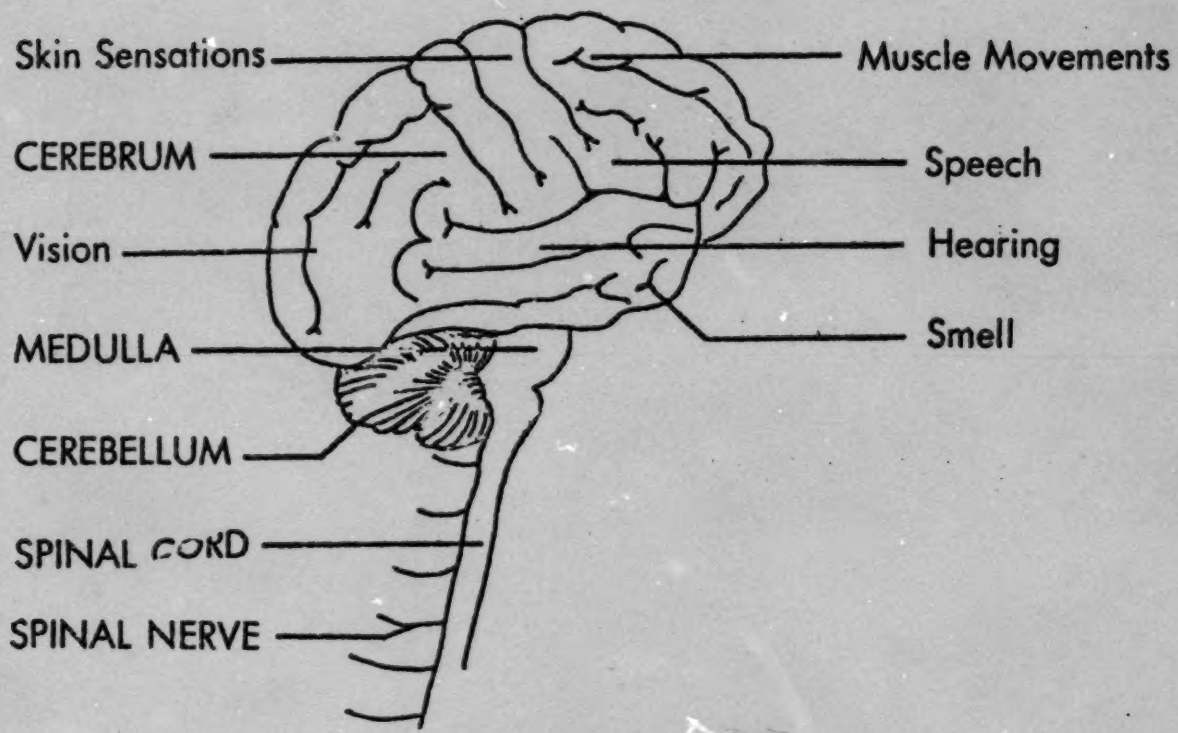


FIG. A. PARTS OF THE BRAIN AND ACTIVITY AREAS

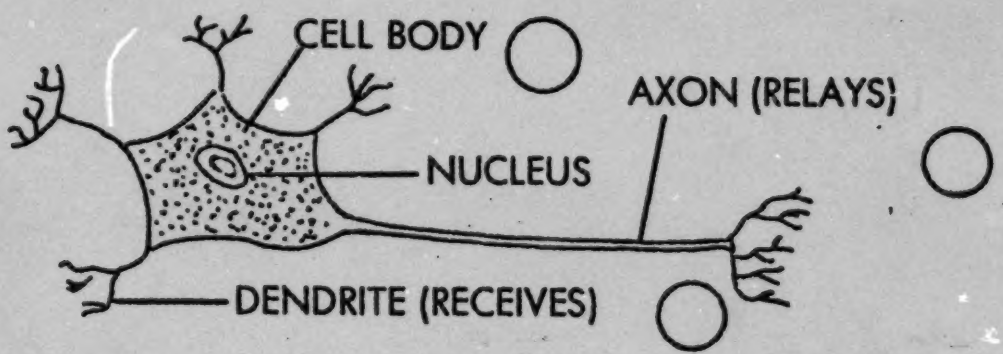


FIG. B A NEURON, NERVE CELL

NERVE IMPULSE PATHWAY

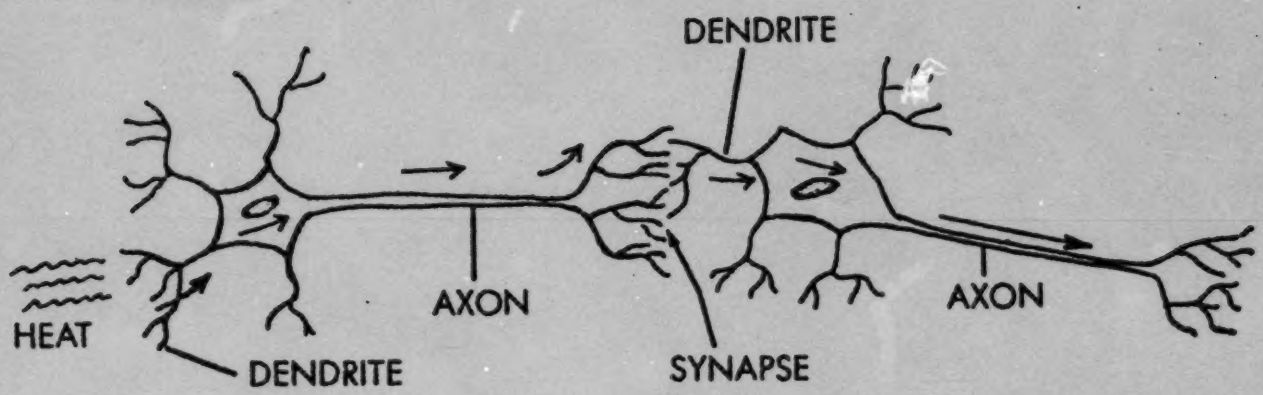


FIG. A SYNAPSE — the region over which an impulse must pass

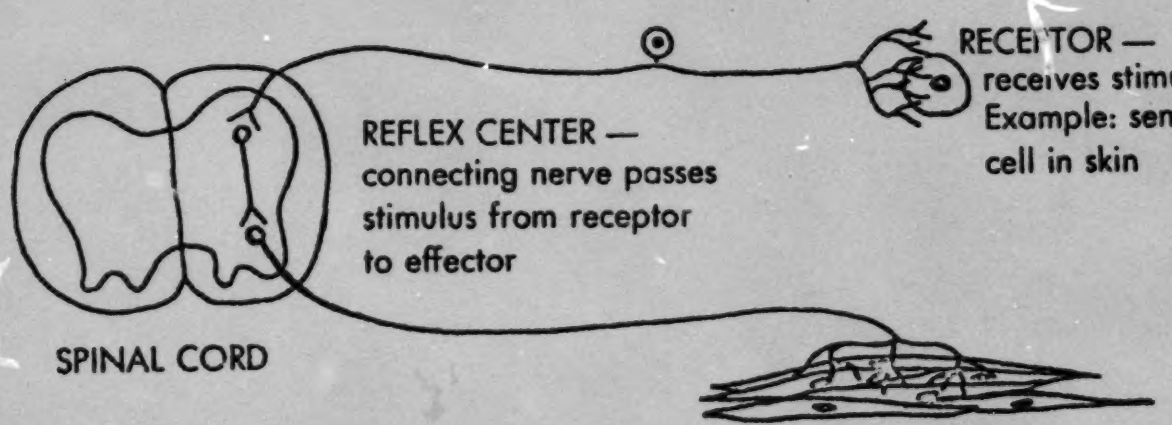

RECEPTOR — receives stimulus Example: sensory cell in skin
REFLEX CENTER — connecting nerve passes stimulus from receptor to effector
SPINAL CORD
EFFECTOR — reacts to stimulus Example: muscle or gland

FIG. B THE REFLEX ARC

RESPIRATORY SYSTEM

The function of the respiratory system is to bring oxygen into the body and get rid of carbon dioxide and other gases. Parts of the respiratory system, used to carry out this function are - nose, throat, windpipe, bronchical tubes, and the lungs.

The respiratory system, from your nostrils to the tiny air sacs within your lungs, makes the exchange of CO_2 for O_2 possible. Breathed in (inhaled) air is filtered, moistened, and warmed in your nasal passages, throat, and windpipe (trachea). The "cleaned" air passes through your windpipe into two bronchial tubes -- branches of the windpipe. One tube goes to the right lung and one to the left lung. Within the lungs the bronchial tubes divide into smaller branches. Located at the end of the bronchial tubes are tiny clusters of little air sacs. Air sacs have very thin walls. It is here that O_2 from the air passes into the blood and CO_2 passes out of the blood into the air sac. When you breathe out (exhale) the CO_2 and other gases are removed from the body. The work of inhaling and exhaling, called breathing, is carried on by the ribs, rib muscles and diaphragm. When the rib muscles and diaphragm contract, air rushes into your lungs. When the rib muscles and diaphragm relax, air is forced out by the change of lung size and pressure within the lung and chest cavity. The exchange of oxygen for carbon dioxide within the lungs is called respiration.

COMPLICATIONS, PROBLEMS AND PERSONNEL:

Various conditions interfere with normal nasal breathing. During acute stages of a cold we are unable to breath through our nose. Dust and smoke in the air or excessive smoking may have the same effect.

The body has various ways of removing fluid or other foreign materials which have accumulated in the breathing passages. The sneeze is an involuntary reaction to such materials. The lower air passages have their mechanisms for removing these substances: (1) the action of cilia (2) muscular or peristaltic movements of the bronchioles to push materials into the large bronchi (3) the cough reflex.

Enlarged tonsils and adenoids offer obstructions in the breathing passage. The diseases of the respiratory system could be divided into three groups. One group includes nose illnesses that arise from industrial working or environmental conditions. The second group representing the communicable diseases. The third group being noncommunicable diseases.

Some common diseases of the respiratory system are sinusitis, cold, bronchitis, hayfever, asthma, tuberculosis, tonsilitis, laryngitis, pleurisy and asthma.

Specific respiratory disorders common to smokers and some non-smokers are chronic bronchitis, emphysemia and lung cancer.

Medical specialists involved with the respiratory system are many. A few are:

Inhalation therapist - assists people to breathe by administering oxygen to persons who have just been operated upon, those who have asthma or pneumonia or babies with respiratory difficulties.

Allergist - treats and diagnoses body reactions which show hypersensitivity to drugs, pollens, foods, animals or other substances.

Otolaryngologist - a specialist in diseases of the ear, nose and larynx.

Radiologist - a physician who is skilled in the diagnostic and therapeutic use of x-rays.

Rhinologist - a physician who specialized in disorders of the nose.

REVIEW:

Your respiratory system includes the air passages in the nose and throat, the windpipe, bronchi, and lungs(containing bronchial tubes and air sacs). The lungs take in oxygen and get rid of carbon dioxide for all the cells of your body. Air must be warmed, moistened, and filtered before it reaches the millions of air sacs in the lungs.

The energy you require is released by the oxidizing of food inside your cells. Excess heat is allowed to escape from your body, so that your temperature stays at about 98.6 F. Your skin helps to regulate your temperature by giving off excess heat through radiation and perspiration. You also give off heat when you exhale air from your lungs.

To help you understand the respiratory system define the following words:

Adenoids

Allergist

Asthma

Bronchi

Bronchial Tubes

Bronchitis

Carbon Monoxide

Chronic Bronchitis

Cilia

Diaphragm

Emphysemia

Epiglottis

Hay Fever

Humidity

Inhalation Theropist

Larynx

Lung Cancer

Lungs

Medulla

Otorhinolarynagologist

Radiologist

Respiration

Sinuses

Tuberculosis

Vital Capacity

Voice Box

Wind Pipe

1. Why should you use your mouth only as an emergency breathing entrance?

2. What good are the hairs in your nose?

3. Their are two types of breathing. (rib and diaphram). What type of breathing do you use?

4. How much can the lungs hold?

5. Why do tonsils have to be removed?

6. Why do people need to have their adenoids removed?

7. Why are humans classified as warm blooded?

8. Name the four ways your body is warmed?

9. What are the three ways your body is cooled?

10. What is the normal body temperature?

11. Why is 68 to 70 F. a good suitable room temperature?

12. In your own words explain briefly <u>but</u> thoroughly what the respiratory system is.

13. In your own words explain briefly <u>but</u> thoroughly how the respiratory system works.

On the illustration of the respiratory system label the following:

Adenoids

Bronchi

Bronchial tubes

Diaphragm

Epiglottis

Larynx

Lungs

Sinuses

Voice Box

Wind pipe

RESPIRATORY SYSTEM

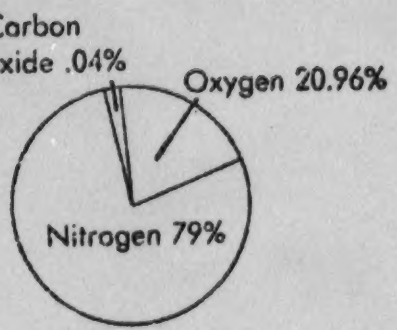


FIG. A INHALED AIR

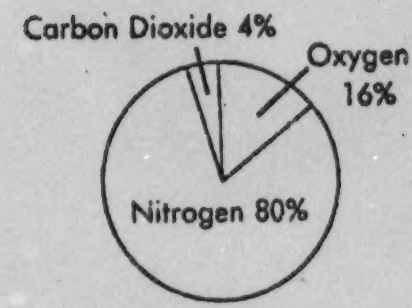


FIG. B EXHALED AIR

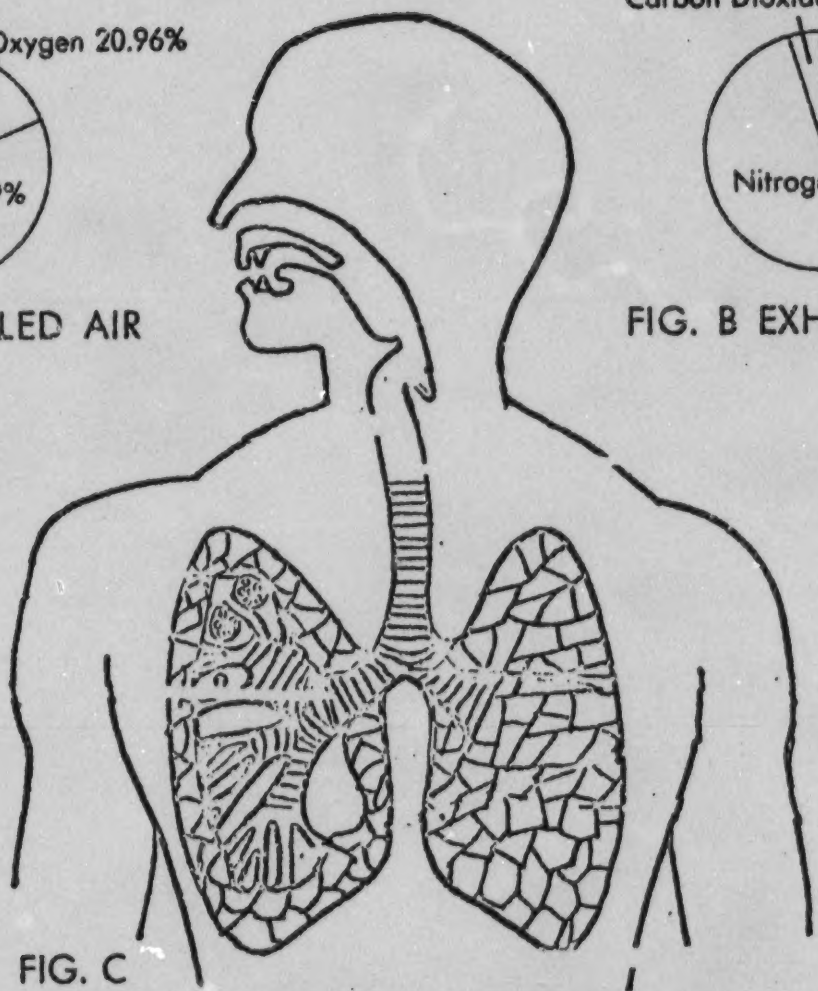


FIG. C

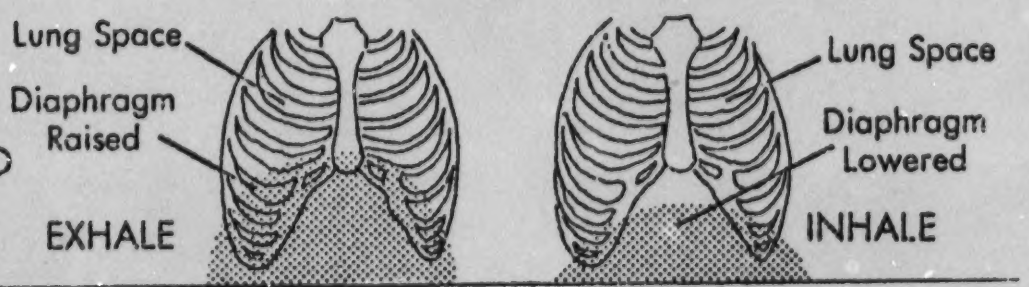


FIG. D

REPRODUCTIVE SYSTEM

Reproductive systems are perhaps the most unique of all the body systems. Although male and female systems are significantly different they do have similarities.

Male: The male sexual organs consist of the penis and testicles on the outside and several important glands and tubes inside the body. The penis is a soft, spongy, cylindrical tube, a little over an inch in diameter and about four inches in length when hanging limp and relaxed in the groove beneath the pubic bone. Its outer extremity, called the head or glans, is slightly larger in diameter than the main body of the tube, and it is here where the principal nerve endings of sexual feeling are located. At birth, the end of the penis is covered with a fold of soft, flexible skin, called the foreskin. Many doctors recommend the operation of circumcision, which removes the foreskin from around the glans or head of the penis. Smegma is the waste matter which accumulates under the foreskin.

When a male is aroused the brain and spinal centers change the supply of blood sent to the penis; its porous tissues become filled with blood; and the vessels for the returning blood are constricted. As a result the penis becomes stiff, rigid and extends to an angle from the body. When so erect, the penis increases considerably in both length and diameter. If sexual stimulation is slight or brief, the flow of blood is soon released and the penis then returns to its usual soft and insensitive condition. If stimulation is continued or increased by thought, or by friction of the glans along the vaginal walls after penetration, the nerves in the region of the prostate gland come into play and the fluids produced and stored in the seminal vesicles and the prostate gland are forced out through the urethra in tiny oozing spurts. This is called ejaculation. It usually takes place at the height of the sexual orgasm.

The testicles are two firm, oblong glands enclosed in a soft, elastic sac called the scrotum. These glands produce microscopic cells known as spermatozoa. The sperm cells mature in the tubules of the testicles and in the epididymis and find their way up through a small tube, the vas deferens, into the ampulla, where they are stored. During sexual excitement fluids from the prostate and the siminal vesicles serve to float the spermatozoa along and at the same time awaken in them a lively swimming motion, so that, when they are deposited in the vagina, they are able to travel into the uterus and the fallopian tubes.

Many hundreds of millions of these microscopic sperms are to be found in each ejaculation of a half teaspoonful or more of fluids. These sperm are either X (female) or Y (male). They are the determiners of a newborn child's sex.

The prostate gland is more or less soft, spongy gland, about the size of a walnut, which surrounds the male urethra just below the bladder. Adjoining it, and somewhat below and on either side of the bladder, are two glandular sacs known as seminal vesicles. These help to produce and store some of the pale, starchlike fluids which are discharged at the peak of the orgasm.

After a male reaches puberty in early adolescence, the seminal reservoirs more or less regularly fill with siminal fluids until inner pressures set off the control mechanism and the fluids are emptied out through the penis, as in sexual intercourse. Because they usually occur in sleep without conscious sexual intent, these discharges are called nocturnal emissions or wet dreams. The latter term is something of amisnomer since only an occasion are they in any way related to a dream.

Female: The internal female sex organs consist of two ovaries, two uterine or fallopian tubes, the uterus and the inner four-fifths of the vagina. The ovaries which are walnut sized secrete female hormones and store ova (eggs) until they are released (ovulation). Upon release the ova move through one of the fallopian tubes, which is four or five inches long and about pencil size in diameter, by means of cilia. The fallopian tube enters the upper or top portion of the hollow, pear shaped uterus. The lower portion of the uterus, also known as the neck of the uterus, is the cervix. The cervix leads to the vaginal canal tube which is capable of considerable delation. The vagina is the organ that receives the penis during the act of sexual intercourse.

The external female reproductive organs are collectively called the vulva. The vulva consists of the mons pubis, labia majora, labia minora, the clitoris the vestibule and the outer one-fifth of the vagina. The mons pubis is made up of fatty tissue which lies over the pubic bone. The labia major and the labia minor are folds of tissue which protect the internal reproductive system. The clitoris is a small cylindrical organ similiar to the male penis. It is composed of spongy erectile tissue which becomes engorged with blood and erect when stimulated. The vestibule is the area enclosed by the labia minora which houses the openings of the vagina and the urethra.

Menstruation is a monthly discharge of blood, other fluids and debris from the uterine wall or endometrium. Menstruation usually begins between age 11 and 15 and ceases around age 45 or 50. The menstrual cycel is measured from the onset of one menstrual flow to the day before the next flow and varies considerably in women. While the average length is from 28 to 30 days, young women tend to have longer cycels than do older women and young women also tend to have greater variation in the length of their cycles. The menstrual cycle can vary from 21 to 90 days and still be considered physiologically normal. Progesterone, estrogen and FSH (follicle stimulating hormone) are the hormones which regulate the normal ovulation-menstruation cycle.

Two old wives tales should be taken into account here. One is that physical activity is harmful during menstruation. Physicians generally agree that females should carry on activities as usual during menstruation. The other old wives tale is that sexual intercourse during menstruation will cause physical distress. Research has clearly shown that sexual activity will not increase physical distress.

Comparison of Male and Female physiological growth

Male:

1. Genital organs begin to enlarge
2. Pubic hair makes its appearance
3. Height and weight change rapidly
4. Shoulders widen
5. Hair appears in arm pits
6. Breasts may enlarge temporarly
7. Beard begins
8. Oil glands become active (perhaps acne_
9. Voice gets deeper
10. Not every male will follow this to a tee.

Comparison of Male and Female Physiological Growth (continued)

Female:

1. Breasts enlarge
2. Menstrual cycle begins
3. Hair appears on legs and arm pits
4. Hips widen
5. Oil glands become active
7. Not every girl will follow this to a tee. NOTE: Females generally mature about two years earlier than males.

COMPLICATIONS, PROBLEMS AND PERSONNEL

A variety of diseases, infections and inflammations can afflict the male and female reproductive systems. Venereal disease is a group of contagious diseases which are communicated mainly through sexual intercourse. Syphilis and gonorrhea are the two major bacterial venereal diseases. Gonorrhea is at epidemic stages in the United States today.

A number of other non-venereal diseases affect the reproductive areas, some are: trichomoniasis, moniliasis, venereal warts and dermatoses. Genital inflammations occur in any organ. Some of these common ones are: cystitis, epididymitis and prostatitis.

Polyps or benign tumors can be found in any body cavity where there is mucous tissue. The uterus is a common site. Cancer can attack any part of the reproductive system; the most common sites are the cervix in the female and the prostate gland in the male.

For a variety of reasons sterility affects, at times, both males and females. Sometimes it is physically necessary or advantageous that a person become sterile. Vasectomies in males; hysterectomies in females and the removal of other primary sex organs in both sexes can create a sterile condition.

The inability, for various reasons, to have sexual intercourse in males is called impotency; in females it is called frigidity. In both cases the cause is not always physical in nature.

All young adults should be knowledgeable of precautions against reproductive disorders and diseases. Your physician will not generally check for gonorrhea or syphilis unless you ask and tell him what you suspect. The Oregon State law guarantees that any person twelve years or older can get free, confidential (will not notify your parents) medical treatment for V.D. During an annual and regular thorough exam a physician will use a speculum to obtain a Pap smear, if you are a female. A Pap smear is a sample of female cervical fluid and cells which will help to detect the presence of cancer cells. Inspection of the prostate gland may reveal, in the male, early signs of prostatic cancer. A reproductive specialist for females is a gynecologist; for males a urologist.

REVIEW:

Both male and female reproductive systems differ, although they do possess similarities. The male reproductive system is an external system while the female system is both external and internal. Young adults develop sexually at different rates; not all follow the physiological growth pattern to a tee. With an understanding of the sexual systems one can develop a comfortable familiarity with one's own body as well as helping to dispel false notions about the sexual functioning of the opposite sex.

To help you understand the reproductive systems define the following words:

Male

1. Ampulla
2. Circumcision
3. Ejaculation
4. Epididymis
5. Foreskin
6. Glans penis
7. Lubricating gland
8. Nocturnal emission
9. Orgasm
10. Penis
11. Prostate gland
12. Scrotum
13. Semen
14. Seminal vesicles
15. Smegma
16. Spermatozoa (X and Y)
17. Sterility
18. Testicles
19. Urethra
20. Urologist
21. Vas Deferens

Female:

1. Cervix
2. Clitoris
3. Endometrium
4. Fallopian tube
5. Gynecologist
6. Hymen
7. Hysteroctomy
8. Hymen
9. Labia
10. Menopause
11. Menstruation
12. Orgasm
13. Ovary
14. Ovulation
15. Ovum
16. Pap smear
17. Sterility
18. Uterus
19. Vagina

Below chart the female ovulation/menstruation cycle.

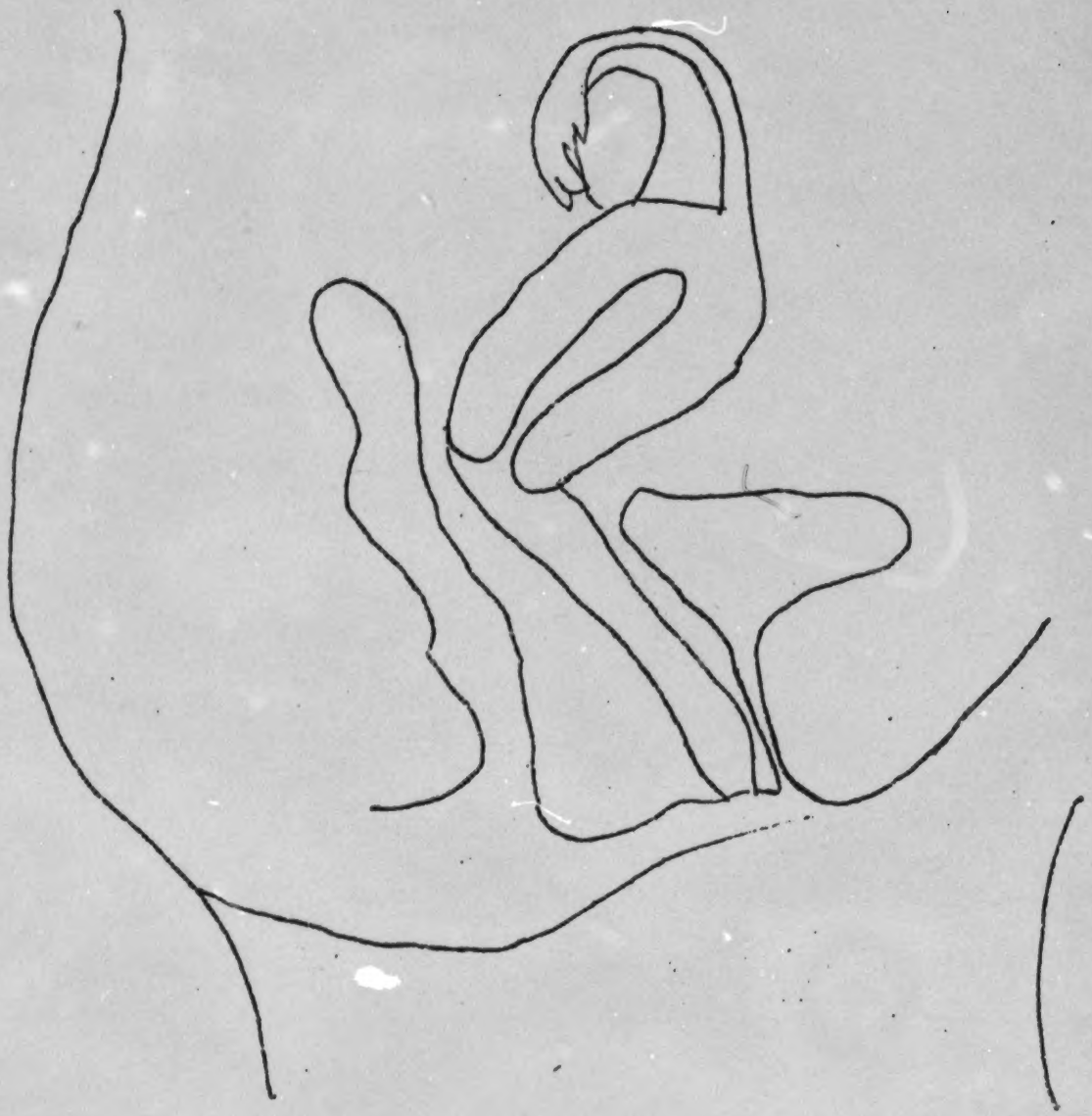
Complete the following statements:

1. The storage place for immature ova is the_____.
2. During intercourse, the male sex cell is deposited in the_____
3. The fluid released by the male during intercourse is_____
4. The skin covering the head of the penis is the_____
5. The lining which is built up in the uterus each month is the_____
6. A vital source of sexual satisfaction in the female is the_____
7. Sperm are_____than ova.
8. Women menstruate approximately_____years.
9. The sex of the child is determined by the_____.
10. The end of menstruation is called_____.

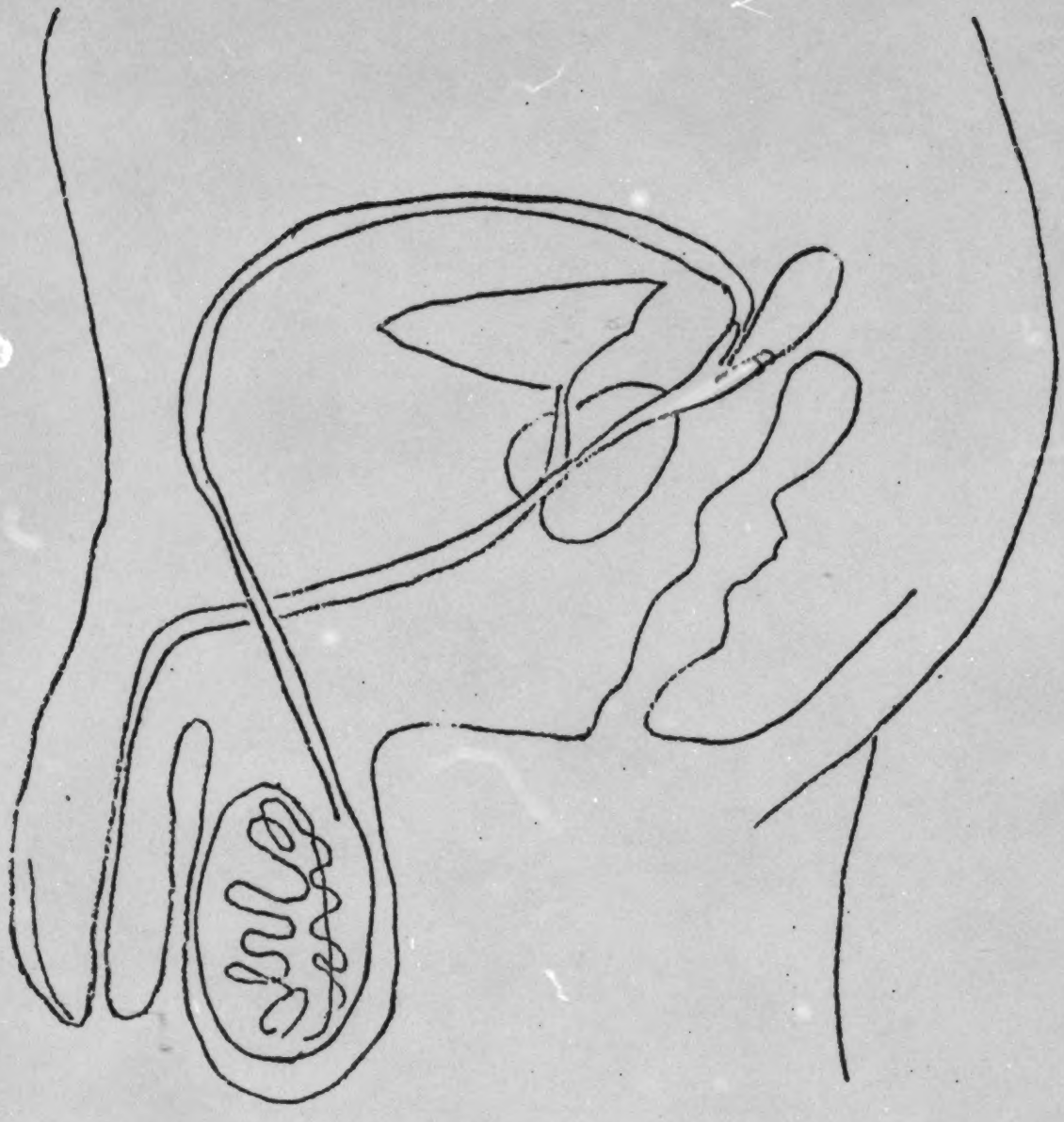
On the diagram of the male reproductive system label the following parts: Ampulla, Epidiymis, Foreskin, Glans penis, Penis, Prostate gland, Scortum, Seminal vesicles, Testicles, Urethra and Vas Deferens

On the diagram of the female reproductive system label the following parts: Cervix, Endometrium, Fallopian tube, Ovary, Uterus, Vagina

FEMALE REPRODUCTIVE SYSTEM



MALE REPRODUCTIVE SYSTEM



SKELETAL SYSTEM

The skeletal system provides a framework for the body, serves as an attachment for muscles, and gives protection to organs.

The skeletal system is made up of 206 bones. There are two parts to the skeletal system - the axial skeleton and the appendicular skeleton. The axial skeleton consists of the skull, spinal column, and the ribs. The appendicular skeleton consists of the bones of the shoulder and arms, and those of the pelvis and legs. Bones are composed of inorganic calcium and phosphorus salts. Most bones are filled with a substance called marrow which manufactures red blood cells and some of the white blood cells. Bones are covered externally with a membrane called the periosteum. There are four main shapes of bones - flat, long, short, and irregular.

Joints are the places where bones connect. There are three general classifications of joints -- immovable, a slightly moveable and freely moveable.

Joints are grouped depending on the amount of motion they permit. Immovable joints are bones locked tightly. The skull and breastbone are examples of immovable joints. Slightly moveable joints are separated by broad, flat discs of hardened cartilage. This cartilage can be stretched and squeezed to some degree. Bending and twisting are actions of slightly moveable joints. Examples of this kind are the hipbone and the backbone. Freely moveable joints allow a great deal of movement. Elbows, knees, shoulders, and wrists are examples of freely moveable joints. Freely moveable joints are also described as gliding joints, (wrist bones, bones of spinal column), pivot joints (head on spine) hinge joints (finger, elbow, knees), and ball and socket joints (shoulder and hip joints). Sprains and dislocations are injuries to joints of the body.

COMPLICATIONS, PROBLEMS AND PERSONNEL:

Bones may be deformed by diseases, such a rickets, arthritis, rheumatism, and tuberculosis. Badly formed bones may also result from gland trouble.

Often, the trouble is caused by purely mechanical factors. Deformed bones may result from some constant stress which pushes or pulls the bones out of position and causes them to grow out of shape. It may make the cartilage between bones grow thicker on one side than on the other, so that a joint assumes an unnatural slant. For example, the cartilage discs between the vertebrae may easily become too compressed on one edge if the spine is constantly bent in the same direction. Examples are: Spinal curves, round shoulders, unequal length of legs, pronated ankles, flat feet or misshapen facial bones.

Prosthetists make and fit artificial limbs for amputees. They teach patients how to use these artificial limbs. Therapists also work with persons who have skeletal disorders. The specialist in the treatment of chronic diseases of the joints and spine and corrections of deformities is called an orthopedic surgeon.

REVIEW

Your respiratory system includes the air passages in the nose and throat, the windpipe, bronchi and lungs (containing bronchial tubes and air sacs). The lungs take in oxygen and get rid of carbon dioxide for all the cells of the body. Air must be warmed, moistened, and filtered before it reaches the millions of air sacs in the lungs.

SKELETAL SYSTEM

To help you understand the Skeletal System define the following:

arthritis

appendicular skeleton

axial skeleton

backbone

bursitis

coccyx

curvature of the spine

dislocations

fracture ligaments

lumbago

marrow

orthopedic surgeon

ossified

patella

pelvis

periostrum

prosthetists

ribs

sacrum

skull

spinal column

spinal cord

sutures

tendons

vertebra

Bones are sometimes broken or damaged by accident. What are compound, simple and green stick fractures?

1.

2.

3.

What temporary aid might you offer someone with a broken leg in the wilderness?

Everyone's skeletal system is not exactly the same. Some people grow very tall; others grow hardly at all.

What might be one cause of excessive growth?

What might be one cause of stunted growth?

What is double-jointness? What causes it?

Good posture means the body is in balanced alignment. Good posture eliminates stiffness, tension and strain; it should be natural. Poor posture can indicate a great deal about a person in addition to their state of mental health. Poor posture may, in fact, effect the state of one's physical health.

Draw a typical example of 'poor' posture as apposed to 'good' posture.

Make a list of occupations in which good posture would contribute to success.

1.
2.
3.

Make a list of occupations in which people tend to develop poor posture.

1.
2.
3.

Do you have any personal posture problems? What are you doing about them?

Using the skeletal system illustration, mark the names of the bones that protect;

a. the heart_____ b. the brain_____
c. the spinal cord_____ d. the lungs_____

Give one example of each type of bone shape (use correct terminology):

a. long_____ b. short_____
c. flat_____ d. irregular_____

Using the hand out on skeletal joints label each type of moveable joint:

a. wrist_____ b. shoulder_____
d. skull atop vertebra_____ d. knee_____

Identify each type of moveable joint:

a. hip_____ b. ankle_____
c. knuckles_____ d. elbow_____

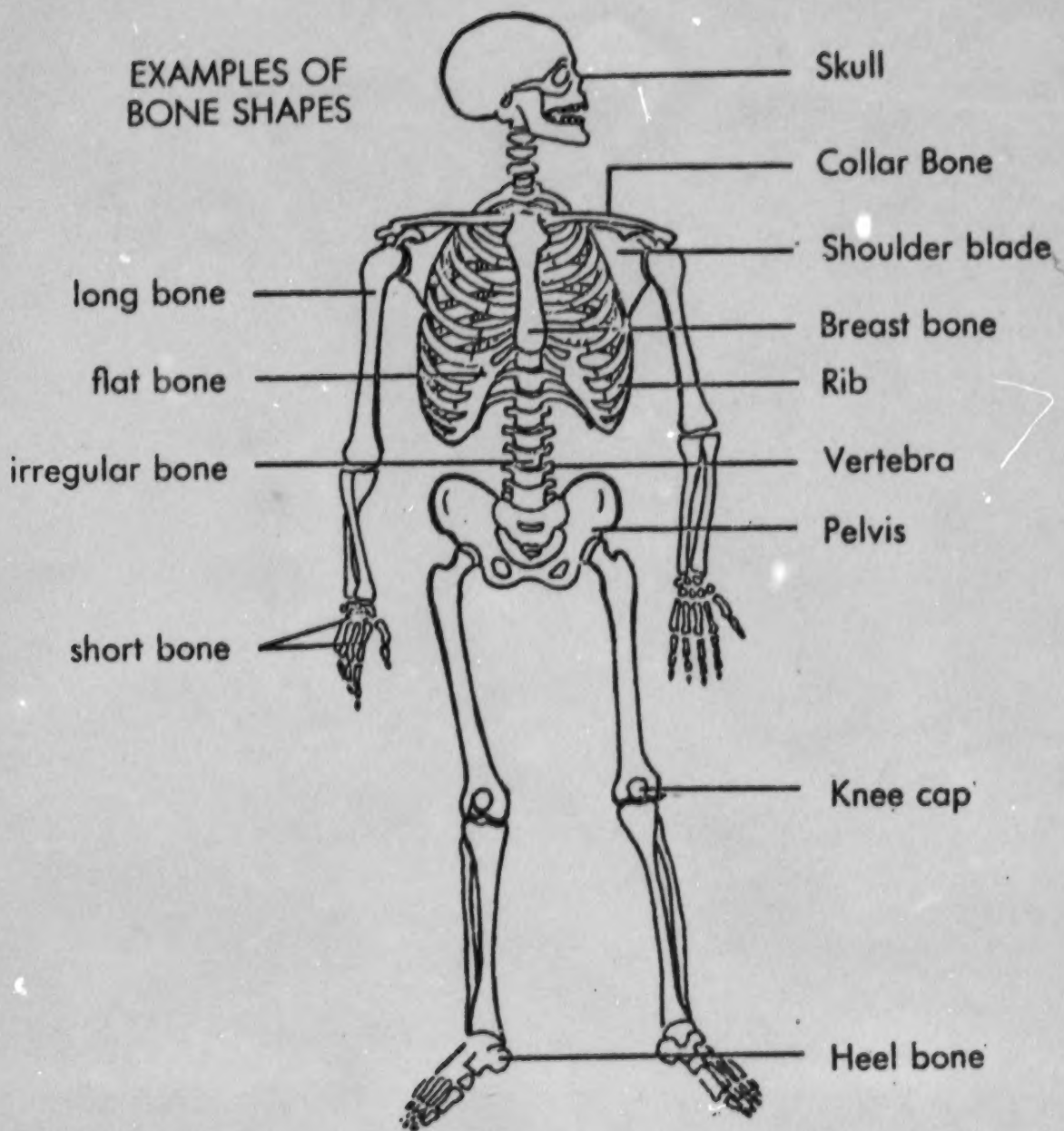
Tendons are tough extensions of muscle which attach to bones and strengthen joints. The body's most famous tendon is the_____

Some joints are protected by a small sac called a bursa. Bursas have smooth surfaces and contain small amount of lubricating fluid. They act as cushions to eliminate friction between moving bones. What is bursitis? What could be its cause?

Cartilage is flexible, elastic connective tissue. It can be either temporary or permanent. Much of an infant's skeleton is cartilage that gradually becomes bone -- this process of change is called ossification. Give an example of protective permanent cartilage in an adult body.

THE SKELETAL SYSTEM

EXAMPLES OF
BONE SHAPES



JOINTS

FIG. A WRIST

FIG. B SHOULDER

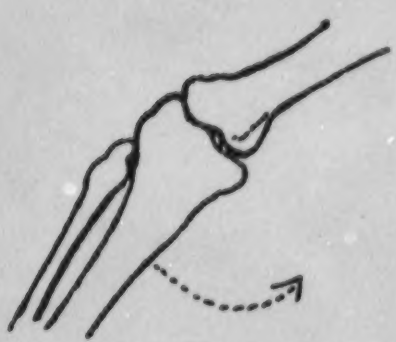


FIG. C KNEE

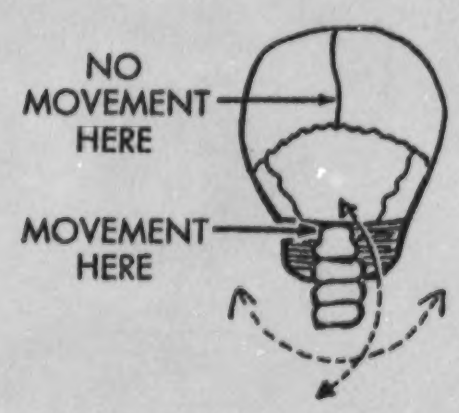


FIG. D SKULL ATOP VERTEBRA

Types of Freely Movable Joints

BALL AND SOCKET — Rounded end of bone fitting snugly within another bone.

HINGE — Movement at joint in one direction—like a door.

PIVOT — Bone resting atop another bone, permitting free movement.

GLIDING — Bones slipping over other bones with a free flowing movement.

Pages 142 through 156 are samples of common social/health issues activities.

All are designed to gather information, formulate value judgements and increase awareness.

The Health Products/Services/Quackery activity is designed to utilize resource materials and periodicals. This activity encourages students to read across the counter magazines and to evaluate their contents.

WORKSHEET ON AGING Name_____

1. How old is "old"? (Do not write a number - describe "old" in your own words.)

2. When should people have to retire? (Again, do not use a "magical number" for your answer"

3 . Should the retirement age be different for different jobs? If yes, why?

4. By the appropriate heading, list as many benefits as you can for the elderly.

Economic:

Social:

Psychological:

Medical:

5. By the appropriate heading, list as many problems you can think of that old people must face.

Economic:

Social:

Psychological:

Medical:

6. Who do you feel should be responsible for caring for older persons? Why do you feel this way?

7. Does society owe anything to old people? If so, what?

8. EUTHANASIA as defined is: easy death or means of inducing one; the act or practice of painlessly putting to death persons suffering from incurable conditions or diseases. Another term for it is MERCY KILLING.

Old age is an incurable condition....Is this enough reason to justify, in your own mind, euthanasia? Why?

Use the dictionary for numbers 9 through 14.

9. Define SENESCENCE in your own words.

10. Define SENILITY in your own words.

11. Define GERONTOLOGY in your own words.

12. Define GERIATRICS in your own words.

13. What do you think might be the worst part of growing old? Why?

14. What do you think might be the best part of growing old? Why?

ALCOHOL WORKSHEET Name_____

This worksheet contains a series of statements presented in eight sets. Read each set. Then make a decision as to which one is the correct one, or most nearly correct one. Circle your choice and then explain why you believe it is correct.

Example:

1. Less than 50% of the teenage population occasionally drink alcohol.
(2.) More than 50% of the teenage population occasionally drinks alcohol.

Recent studies show that about three out of five or 60% of all American teenagers drink alcoholic beverages occasionally.

---

1. Alcohol is a harmful substance.

2. Alcohol is neither good or bad.

Explaination.

---

1. Alcohol is a stimulant.

2. Alcohol is a depressant.

Explaination:

---

1. If two men of approximately the same weight were each to drink four glasses of beer, the manner and degree of their intoxication would be the same.

2. If two men of approximately the same weight were each to drink four glasses of beer, it would be difficult to predict the effects of the alcohol.

Explaination.

1. Since it does not yield any body nutrients, alcohol is not considered a food.

2. Alcohol is classified as a food.

3. A good way for a thin person to gain weight would be for him to take up drinking.

Explaination:

---

1. All things being equal, persons who drink a great deal of alcohol are more susceptible to certain diseases than non drinkers. Alcohol affects many parts of the body. Drinking alcohol may result in a lowering of the body temperature. Alcohol may induce a sense of euphoria.

2. All things being equal, persons who drink a great deal of alcohol have the same susceptibility to disease as non-drinkers. Alcohol usually affects only the brain. Alcohol raises the body temperature. Alcohol speeds up the body precesses, thus creating a sense of well being.

Explaination:

---

1. Occasional and moderate social drinking are usually harmful.

2. Occasional and moderate social drinking are usually not harmful.

Explaination:

---

1. One or two drinks of alcohol have virtually no effect on an automobile driver's judgement, reflexes, and control of the car.

2. One or two drinks of alcohol may seriously affect an automobile driver's judgement, reflexes, and control of the car.

Explaination:

1. Although there is no known cure for alcoholism, the alcoholic can be treated so that he can live successfully without drinking.

2. Once an individual has become an alcoholic, there is almost no chance that he will ever again be happy, useful citizen.

Explaination:

TEN WAYS TO SAY 'NO'

It's not a big deal to refuse a drink. Using the examples below try to write ten 'no's'.

No Thanks
- No thanks, I feel good enough already.
- No thanks, I can get the same effect just by taking off my glasses.
- No thanks,_____
- No thanks,_____

Sorry
- Sorry, I never drink on Fridays,
- Sorry, I'm allergic to alcohol.
- Sorry,_____
- Sorry,_____

Not Now
- Not now, I've given it up on a bet.
- Not now, I'm testing my will power.
- Not now,_____
- Not now,_____

I'd Love
- I'd love one but I get high on grape juice.
- I'd love one but I'm counting calories.
- I'd love_____
- I'd love_____

What I'd really love
- What I'd really love is a coke.
- What I'd really love is seven-up, straight please.
- What I'd really love is_____
- What I'd really love is_____

Ecological Living Name_____ (1)

For many of these answers you will have to check at home and make some observations of how your family lives.

1. Do you let the water run while you brush your teeth?_____

2. Do you let the water run while you wash your face?_____

3. Approximately how many times do you flush the toilet each day?_____

4. How many times per day do you bathe or shower?_____

   a. How much water does a toilet tank hold?_____

5. How many spray cans are in your bathroom?_____

   a. How much water does a half-full bathtub hold?_____

6. How many cars does your family have?_____

7. How many unnecessary lights does your family leave burning each night?_____

8. How many subscription magazines does your family receive each month_____

9. How many advertisement brochures, etc., does your family receive weekly in the mail?_____

10. Is there a litter bag in your family car?_____

11. Do you have a vegetable garden?_____

12. Does your household use colored toilet paper and/or facial tissues?_____

13. What type of laundry soap or detergent is generally used in your household?_____ High_____ Low_____ phosphates.

14. How does your family purchase milk - carton, glass, plastic containers.

15. Check around your house - do you have any of the following (those listed below?)

    Drano
    Liquid Plumber
    Plunge
    Shell No Pest Strip
    Raid
    Black Flag Leaf and Roach Killer

Ecological Living

16. Electricity can also be a form of pollution. Check the items below which you have in your house. If you have more than one indicate.

Electric carving knife
Electric toothbrush
Electric can opener
Power Lawnmower (type?)
Food waste disposal unit
Washer
Dryer
Dishwasher
Electtic ceal starter
Electric shaver
Electric typewriter
Power tools (types?)
Television
Record player
Electric rotisserie
Electric freezer
Electric bottle warmer
Electric curlers
Electric clocks
Electric hair dryer
Air conditioner
Rug shampooer
Sunlamp
Electric blanket
Radio
Hi-Fi set

If any other similar items come to your attention, list them.

List ten things which you as an individual could do, in a small way, to help save the enviorment.

Ecological Living - Independent Project

Walk through a grocery store and see if you can find five (5) items which are poorly, ecologically packaged. List the items which you have found.

Walk through a grocery store and see if you can find five (5) items which have additives or preservatives of an ecologically questionable nature. List the items which you have found.

Within the last year or two has anyone in your family made an effort to fight the pollution problem? Example: by saving bottles and depositing them in a recycling station. Explain the action which that person in your family has taken.

HEALTH PRODUCTS, SERVICES, QUACKERY Name_____

SECTION A

1. Define the word quack.

2. What are the two greatest dangers involved in quackery?
   a.

   b.

3. What types of people turn to quacks?

4. Select one type of quackery which is very old._____
   Explain why people thought it was medically correct.

5. List below four types of common day quackery.
   a.

   b.

   c.

   d.

6. Explain how one in number 5 (above) works.

7. How would you determine if a person is a quack?

8. What four protections do Americans have against quackery?
   a,

   b

   c.

   d.

9. Many health products, although not 100% quack products, are very questionalbe. List below three health products which can be purchased in the drug store that you consider questionable.
   a.

   b.

   c.

SECTION B: RED (Quackery)

After reading one of the articles listed below write three 'I leanred' statements.

"Gadgets that Promise to Slim You Quick" Changing Times Jan '74 p.19

"A Stamp of Disapproval for these Medical Malpractitioners" Todays Health March '74 p.20

"Gyps Aimed at Old People" Changing Times Sept. '74 p.40

"Medical Malpractics" Todays Health March '74 p.20

"Victimizing Cancer Patients" Todays Health Nov.'73 p.28

"What is a Woman Without Breasts" Todays Health April '74 p.30

"The Outright Quacks" The Medicine Show (book) p.77

"How to Read About Miracles" The Medicine Show (book) p. 198

"Granny's Cure-Alls, Part Hokum, Part Truth" Family Health March '74 p.11

Article Selected_____

"I Learned' Statements:

1.

2.

3.

SECTION C: YELLOW (Information)

The best protection in the world against quackery is to possess correct information.

After reading two of the articles listed below write a short abstract on them.

"Evaluating the Cold Remedies" Todays Health Feb. '74 p. 18
"Vitamin E Deoderant" Todays Health march '73 p. 6
"Stamp Out Athletes Foot" Family Health June '73 p. 15
"Control of Oily Skin" Family Health April '74 p. 7
"What you can Learn About Health From T.V. Todays Health Jan '73 p.22
"Bad Breath" Todays Health Feb. '73 p. 15
"Birth Control Blotches" Todays Health Aug. '73 p. 9
"Acne" Todays Health Feb. '73 p. 14
"Cosmetic Poisoning" Todays Health Aug. '73 p. 9
"Blackheads" Todays Health Nov. '72 p. 10
"Male Baldness" Todays Health Dec. '73 p. 6
"Hair Dye" Todays Health Nov. '72 p. 10
"Sometimes Good Drugs are Bad for You" Changing Times April '74 p.30
"Diet Frauds" Todays Health Nov. '72 P. 46
"Breast Silicone Injections" Todays Health June '72 p.5
Cosmetics" Todays Health Nov. '72 p. 1
"How to READ a Label" Family Health April '73 p. 30
"What you can do About Varicose Veins" Family Health Oct. '73 p.32

Article 1

Article 2

SECTION D GREEN (Self Medication)

Attempts at self-diagnosis and self-treatment of all types of health problems seem to be a great American tradition.

There are very real dangers in attempting self-diagnosis and self-treatment of any kind of sympton. The most serious risk is that a major (even life-threatening) disorder can easily be misdiagnosed as some common, minor problem and be treated as such. For example, a person trying self-treatment might take cough drops when he actually had tuberculosis or lung cancer. Not only would the self-treatment be ineffective and possibly harmful, but proper medical treatment would be delayed, perhaps even too late.

Another danger in self-treatment is that not all home remedies and nonprescription drugstore products are completely safe to use.

After reading one of the articles below write two 'I Learned' statements.

"Self Medication with an Ointment" Todays Health Sept. '73 p.3
"How Safe Is Do-It-Yourself Gynecology?" Family Health Feb. '73 p.25
"Getting a massage that Won't Rub You the Wrong Way" Todays Health May 72 p.34
"When to Treat a Fever and When to Leave It Alone" Family Health Dec. '73 p.7
"Automatic Face Cleansers" Todays Health Dec. '72 p.12
"Pneumonia - Still A Real Threat" Changing Times Nov. '73 p.19

Article Selected_____

'I Learned' Statements:

1.

2.

SECTION E: BLACK (ADS)

The proper selection of health-related products is more important than that of any other type of consumer goods. Not only can much money be wasted on ineffective products, but a person's health, or even his life, may depend on his getting proper treatment for diseased conditions and avoiding the use of dangerous products. It is essential that self-treatment not be attempted when the services of a physician are needed.

Advertisements often are misleading in their attempt to 'sell' a product. After reading one of the advertisements listed below evaluate the quality of the ad. The following questions may assist you in the evaluation process:

1. Is the source reliable?
2. Does the ad contain research findings or information to back up its claim?
3. Does the product claim to 'cure all'?
4. Does the ad contain testimonials?
5. Is it government approved?

"Microcard" Todays Health Feb. '74 p. 53
"Emperin" Family Health July '73 p. 3
"Novahistine" (decongestant) Family Health Jan. '73 p.8
"Aspirin" Todays Health May '73 p. 14
"Miralin" Family Health Nov. '73 p.17
"Arthritis, Rheumatism Suffers" Family Health Oct. '73 p.13
"Recover Cover Up Leg Cream" Family Health May '73 p. 52
"Hard As Nails" Family Health May '73 p.52
"Allerest" Family Health May '73 p.11
"Tampax" Todays Health April '73 p.8

Advertisement selected:_____

Evaluation:

SECTION F (Independent Project)

Attach to this page a label from a drug or medication, an advertisement (which you have found at home) or some direct evidence of what you believe is a form of quackery, mis-information or poor self-medication suggestions.

Evaluate why you make your selection and what you believe the real truth to be. Can you back up your opinion???

Decision making experiments included here pp. 158 through 176 are useful as group and/or individual activities.

The Gambling Experiment is a unique approach to the introduction of addiction education. It allows students an opportunity to experience a real life situation. It provides them opportunities to identify and assess their feelings and formulate value positions for and about themselves. Gambling is an excellent beginning point for other addictions which directly affect one's health -- work, drugs, t.v., food, etc.

Survival is a group experiment. It is an excellent opportunity for students to work co-operatively in a group setting. It raises some interesting points -- how important are <u>all</u> members of the group? Do all <u>have</u> to contribute equally? What <u>is</u> equally? Who <u>has</u> what skills? Should females be <u>required</u> to do what males do? Etc.

Water Pollution is designed to test local sample waters -- home tap, school, slew, pond, etc. These experiments raise some serious questions -- what <u>rights</u> do individual citizens have? Who is <u>responsible</u> to test local waters? Etc.

CLASSROOM CASINO - Games of Chance

The addictions most commonly included in health education are drugs--including alcohol and tobacco. 'Addiction education' is yet wider in scope; for example, it most appropriately includes obesity and gambling. Concepts of habituation, finance, tolerance, compulsions, success, failure, risk-taking, etc. run throughout all areas of 'addiction education'.

Gambling is an excellent classroom activity which can be used to dig at the key concepts behind addictions because it directly affects the student. You win or you lose!!!

Teacher Directions: This is a three day activity. Divide your classroom into areas or stations. Take one day to review with students simplified or modified game rules (included here). On the second day use students for 'dealers' and 'bankers' where appropriate. Post game rules for reference. (NOTE: It might be wise to suggest to students that they at least try each game).

Procedure: Give each student a specified amount of money (perhaps $185) and set them loose. Before the class session is over have students complete the Games of Chance/Response Sheet (included here).

Follow-up: On the third day use response sheets as a basis for class discussion. Class discussion can possibly follow several tracks:

1. Feelings
2. Self deception
3. Covering losses
4. Gamblers Anonymous
5. Everyday gambles or compulsions (cleanliness, orderliness, time schedules, mail purchases sight unseen, purchasing a different brand of a regularly purchased product, etc.)

GAMES OF CHANCE / Simple and Modified Rules

PENNY PITCH

BET - everyone must bet the same amount.

PITCH - you chip from behind the line to the wall; everyone pitches once.

WINNER - is the chip which lands closest to the wall.

WINNER - starts the second game; repeat as above.

TIE - no one wins!!!

RULES CAN BE EXPLAINED AND POSTED ON THE CLASSROOM WALL NEAR THE PARTICULAR GAME.

6 CARD STUD

THE DEALER - deals two cards down to each player and four cards up - one at a time. The dealer deals and controls the game - he does not play

THE BEST POKER HAND WINS
- 1 pair (2 of a kind)
- 2 pair (2 pairs of two of a kind)
- 3 of a kind
- a 'straight' (five in a row)
- a 'flush' (five of the same suit)
- a 'full house (three of one and one pair)
- 4 of a kind
- 'straight flush'
- 'royal flush'

PLAYERS:
- play against each other
- bet after each 'up card' (each card turned face up)
- can raise the bet up to three times for each 'up card'

NOTE: $10.00 limit on all bets

21

In this game you are playing against the dealer. The object is to hold cards with a face value closer to 21 than the dealer.

KING, QUEEN, JACK & 10 = 10 points each

An ACE = 1 or 11 points (your choice)

ALL OTHER CARDS = face value

CARDS WHICH EQUAL OVER 21 - make you lose.

PLAYER RULES:
- place your bet
- you receive two cards
- add your cards up in your mind, decide if you need another one. If you need one - ask for it.

HINT: If your cards equal 17, 18, 19, 20 you probably shouldn't take another card.
- If you are closer to 21 than the dealer, you win
- a tie - no one wins.
- if the dealer is closer to 21 - you lose

DEALER'S RULES:
- DEALER GETS TWO CARDS - 1 up and 1 down
- Dealer must take another card on 16 or lower.
- Dealer must take another card on 'soft 17' (17 with an ace)
- Dealer must stand on 17 or above.

REMINDER - YOU ARE PLAYING AGAINST THE DEALER - NOT THE OTHER PEOPLE AT YOUR TABLE.

RULES CAN BE EXPLAINED AND POSTED ON THE CLASSROOM WALL NEAR THE PARTICULAR GAME.

CRAPS

BET

FIRST ROLL
- If you roll a 7 or 11 you win.
- If you roll a 2, 3, or 12 you lose.
- If you roll a number 4, 5, 6, 8, 9, or 10 it becomes your point.

If your point number comes up before a 7 you win.
If a 7 comes up before your point number you lose.

ROULETTE: Seven Ways to Win at the Game

1. 1st 12 / 2nd 12 / 3rd 12 — If the winning number is in one of those three sections on which you placed a bet you will win 2 for 1.

2. 1 to 18 / 19 to 36 — If the winning number is in one of these sections on which you placed a bet you will win 1 for 1.

3. COLOR BET

Black / Red — If the color you bet on comes up - you win 1 for 1.

4. ODD OR EVEN BET

odd / even — If you have correctly picked the winning number (as odd or even) you win 1 for 1.

5. first 2 to 1 line / second 2 to 1 line / third 2 to 1 line — If the winning number is in a line you bet on you win 2 to 1.

6. 2 NUMBERS — If you place your money on two numbers and one of the two actually comes up you win 15 to 1.

7. 1 NUMBER — If you place your money on one number and it actually comes up you win 35 to 1.

NOTE: Roulette is a game of chance. The bigger the risk you take the bigger the chance you have of winning or losing.

THE RULES ABOVE WILL NEED TO BE POSTED ALONG WITH AN EXPLANATION OF THE LAY OUT OF YOUR ROUTETTE TABLE.

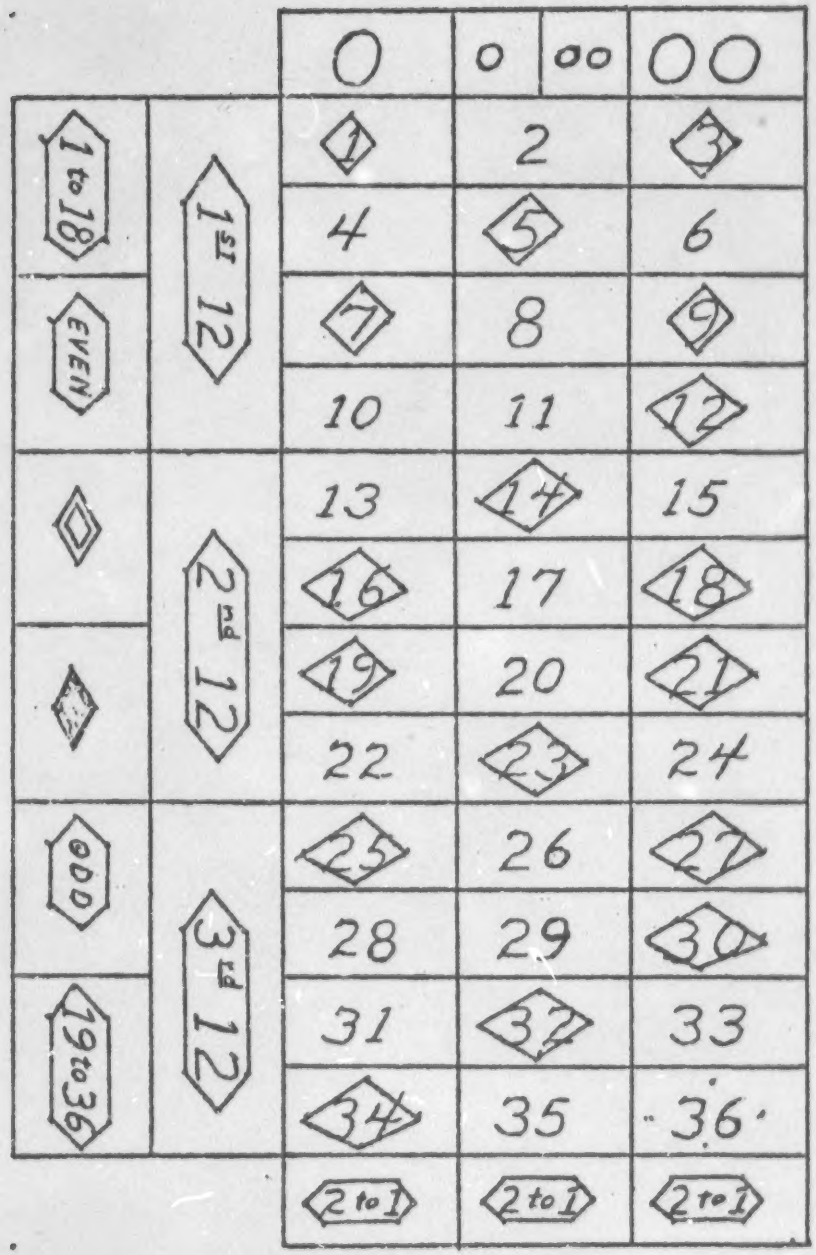
ROULETTE

Roulette is an extremely easy game to play. And it's really very colorful and exciting to watch. The wheel spins and the little ball bounces around, finally dropping into one of the slots, numbered from 1 to 36, plus 0 and 00.

You can bet on a single number, a combination of numbers, or red or black, odd or even.

A ROULETTE TABLE CAN EASILY BE MADE ON LARGE SHEETS OF CONSTRUCTION PAPER WHICH ARE THEN LAYED OUT AND SECURED TO A LONG TABLE.

ROULETTE



◇ =red, black = uncircled nos.

GAMES OF CHANCE

Name_____

Money received: $185

	Money Gambled	Money Won	Money Lost
"21"	_____	_____	_____
CRAPS	_____	_____	_____
PENNY PITCH	_____	_____	_____
POKER (6 card stud)	_____	_____	_____
ROULETTE	_____	_____	_____

Money turned in $_____

_____Check here if you chose to observe only.

GAMES OF CHANCE/Response Sheet

1. What games did you play?

2. Why did you choose the ones you chose?

3. How did you feel when you won?

4. How did you feel when you lost?

5. How did you feel when you saw a friend win?

6. How did you feel when you saw a friend lose?

7. Did you, at any time, win money from a friend? How did you feel about it?

8. Did you, at any time, lose money to a friend? How did you feel about it?

9. Do you think you could become addicted? Explain.

10. Females: How would you feel if your husband gambled away a two-week pay check on pay day before coming home?

11. Males: How would you feel if your wife gambled away the grocery money in bingo?

12. In your personal value system:
    a. is gambling acceptable for you?
    b. is gambling acceptable for others but not for you?
    c. is gambling unacceptable for anyone?
    d. is gambling acceptable to you under certain circumstances?
    Explain which of the above most closely matches your value system; remembering that people are entitled to their own opinion!

GAMES OF CHANCE/Response Sheet

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3. How did you feel when you won?

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    Explain which of the above most closely matches your value system; remembering that people are entitled to their own opinion!

TOBACCO EXPERIMENTS

Teacher Directions:

The tobacco experiments below can be done by students in small groups at various classroom stations. They are designed to (1) provide students with visual information regarding tobacco use (2) initiate questioning procedures and (3) weigh the validity of assumptions. Class discussions are most appropriate following the experiments.

A result/assumption sheet accompanies these experiments.

Equipment needed:

Cigarettes (filter, non-filter brand which claims low tar)
Cotton cloth squares (approximately 2" x 2")
A mechanical smoker (available from Spenco Corp.)
Gallon jog
Glass tubing (several feet)
Rubber tubing (6" diameter to fit a cigarette)
Box of match books
Several twenty-six inch strings (marked at 12", 14", 16", 18" and 20" points).
Fruit flies (purchased through a biological lab.)
Beakers (6 or 8 250 Ml)
Spray can - fine mist (fern sprayer is ideal)
Magazines (10 or 15 'everyday' magazines).
Emphysema leaflets

Procedure:

EXPERIMENT #1 FILTER VERSUS NON-FILTER CIGARETTES

Light a filter cigarette. Blow smoke through the thin white cotton cloth provided.

Light a non-filter cigarette. Blow smoke through the thin white cotton cloth provided.

Consider the differences, if any, which you see.

You may wish to examine the filter of the first cigarette which you used.

Report your findings on the Result/Assumption sheet.

EXPERIMENT #2 SMOKING MACHINE AND MINI LUNG

Follow the directions given for setting up the 'smoking machine'.

Using a 'mini lung' smoke one cigarette with the machine.

EXPERIMENT #3 (continued)

Using another 'mini lung' smoke two cigarettes with the machine.

Consider any differences which you see.

Report your findings on the Result/Assumption sheet.

EXPERIMENT # 4 WATER BOTTLE SMOKING MACHINE

Insert a cigarette into an end of the glass tubing -- it must be the end which is in the water.

Use the other end of the tubing to 'smoke' the cigarette.

What results do you see? -- in the bottle? in the water?

Report your findings on the Result/Assumption sheet.

EXPERIMENT # 5 LUNG CAPACITY - ABILITY TO EXPEL AIR

Ordinarily we partially close our lips in order to blow out objects such as candles on a birthday cake. We should, however, to able to expel adequate amounts of air without the use of our lips.

Open your mouth and expel air from your lungs without using your lips.

Light a match and hold it ten inches from your mouth. Can you blow it out without using your lips? Do the same at twelve, fourteen, sixteen, eighteen and twenty inches.

Compare your distances with the other members in your group. Report your findings on the Result portion of your sheet.

Read through the attached pamphlet on emphysema -- report your assumptions on the Assumption portion of your sheet.

EXPERIMENT #6 ADVERTISING

Tobacco advertising usually uses techniques of persuasion. Some kinds of typical persuasions are listed and described below.

1. Testimonial: An important person testifies that he has used the product.

2. Appeal to the Senses: Pictures or sounds are used to appeal to the senses. The buyer begins to 'taste' and is motivated to buy.

3. Bandwagon: Language is used that suggests that 'everyone' or 'all the people' are doing it or using it.

4. Plainfolks: An ad shows an average person recommending the product, so the average buyer identifies with that person and takes his advice.

5. Glittering generality: An ad uses words like 'best,' 'your first one's never your last one,' 'the only' and 'great'.

6. Appeal to Romance or Fantasy: White knights and green giants, skilled super athletes are featured in a commercial.

7. Humor: People tend to remember or at least have a positive association with an ad that makes them laugh; when they remember the ad they think of buying the product.

8. Statistics: Buyers tend to be impressed by statistics. Ads leave out such important items such as who conducted the study or what kind of people were polled.

9. Cardstacking: Ads give one-sided portrayals of their products. Only the beneficial aspects are mentioned, not the weaknesses.

10. A good-looking, sociable, sexy or well-dressed man or woman sells the product. The buyer associates the product with someone good-looking or admirable and imagines that when he uses the product he will become like that person.

Describe one cigarette advertisement which you remember. Explain which one or ones of the above advertising techniques are used in your ad.

EXPERIMENT #7. LOW TAR AND NICOTINE CIGARETTES (OPTIONAL)

"Vantage" cigarettes claim to be lower than average in their amounts of tars and nicotine.

What type of experiment could you design which could prove or disprove their claim?

With the assistance of your teacher, conduct your experiment. Explain your procedure, your results and assumptions on your Result/Assumption sheet.

RESULT/ASSUMPTION SHEET

Experiment #1 Filter Versus Non-Filter Cigarettes

Results:

Assumptions:

Experiment #2 Smoking Machine and Mini Lung

Results:

Assumptions:

Experiment #3 Water Bottle: Smoking Machine

Results:

Assumptions:

Experiment #4 Lung Capacity/Ability to Expel Air

Results:

Assumptions:

Experiment #5 Fruit Flies and Tobacco

Results:

Assumptions:

Experiment #6 Advertising

Description:

Explanation:

Experiment #7 Low Tar and Nicotine Cigarettes (Optional)

Procedures:

Results:

Assumptions:

SURVIVAL

Several months ago when you were looking through the evening paper you noticed an interesting experimental ad. It promised adventure, excitement, and a full year high school credit, free. All you had to do was fill in the name, address, and phone number. You thought about it for awhile, then asked your parents. They approved your request so you sent in the application.

Just today a registered letter arrived in the mail. You have been selected at random from the thousands of applicants to take part in the experiment. The information enclosed said you will be living with four strangers on a 20 square mile island in the tropics.

The island has never been inhabited so information regarding it is very limited. Airplane pilots who have flown over the island say it has sandy beaches and some small cliffs at one end along with a waterfall which indicates fresh water. There is seafood of all kinds including shellfish; also there are giant sea turtles and goatss. Some of the trees appear to be coconut and banana.

You are leaving now. What will you do first? How will you spend the year? How will you live? What kinds of problems do you. as a group think you will have to solve?

ANSWER THE FOLLOWING QUESTIONS ACCORDING TO THE DECISIONS MADE BY YOUR GROUP.

1. Did you choose some form of government? If you did, what form and why?

2. What responsibilities did you have as a group and how were these divided?

3. How were decisions to be reached within your group?

4. How did your group decide to handle disagreements or conflict?

Questions According To Decisions Made By Your Group 2

5. What rights did you give to each individual in your group?

6. What things does the group have the right to expect from the individual?

7. How did you decide to spend your time?

8. What did your group expect to have accomplished by the end of the year?

WATER POLLUTION EXPERIMENT

General Information

CARBON DIOXIDE TEST - CO_2 content in water means that oxygen is being used by animals living in water. A high content (more than 10mgs.) of CO_2 shows that water animals are highly active and using oxygen rapidly. This indicates low oxygen content in water and oxygen is necessary for fishlife.

DISSOLVED OXYGEN TEST - Dissolved Oxygen is oxygen mixed in water. It is necessary to support fishlife. It also decomposes waste products in water. If not enough DO_2 then fish die and wastes build up in water. Clean, livable water should have at least 12 parts of oxygen per million parts of water.

HARDNESS TEST - "Hard water" means there are minerals in the water. ("soft" water is a lack of minerals.) Calcium, sodium and magnesium are the usual minerals found in water. In large quantities, these minerals can be poisonous. These minerals cause the ring in the tub and bad or bitter tasting water. Most of the water you test will not be high in mineral content unless it is from an underground spring or deep well. If your test is over 10 grains/gallon, the water is of high mineral content.

pH TEST - This test is for the amount of acid in the water. There must be a balance of acid; not very little. Acid kills bacteria in water, but if there is not enough the bacteria grows. If there is too much, the acids poisons the water. Clean water for fish, humans and other animals should be between 6.8-7.5 ph.

DETERGENT TEST - Detergents in the water do two things: (1) the water foams and is ugly, but is not necessarily poisoned; (2)leaves phosphates in water. Phosphates are the real problem. Phosphate is a fertilizer and makes algae grow faster. In turn, algae uses up more of the water's oxygen (look at DO_2 test). Consequently, fish cannot live where there is not enough oxygen.

WATER POLLUTION EXPERIMENTS:

These tests need three (3) things from the testers"

1. a sample of water brought from home
2. close attention to the instructions
3. and "care" about the water you drink.

Perform each test by the instructions using your "home sample" of water. Record the results on your sheet. If you are unclear about your results 1)ask your teacher for assistance and 2)compare your findings with other testers.

WATER POLLUTION EXPERIMENT INSTRUCTION

Carbon Dioxide Test: 2 testers and 2 observers

1. Fill plastic tube with water to top and pour into glass bottle by putting bottle over tube and tipping over right side up.
2. Add 1 drop of Phenolphtalein Indicator (plastic bottle).
3. Add 1 drop of Sodium Hydroxide solution at a time, until solution turns light pink. Swirl tube to mix solution and count number of drops. Each drop equals 5 milligrams per liter of CO_2.
4. CO_2 is a poisonous gas. The more there is in water, the greater the danger of poisonous water. Should not have to add more than 2 drops.

_____drops of Sodium Hydroxide

= _____milligrams/CO_2/liter.

Dissolved Oxygen test: 2 testers and 2 observers

1. Fill glass stoppered bottle with water. Make sure no air bubbles are left.
2. Add 1 packet of D O_1 and 1 packet of DO_2 to water. Plug bottle so no air is trapped. Shake to mix. A fluffy precipitate will form.
3. Let sample stand until upper half of bottle has cleared. Shake again and let stand again.
4. Remove stopper and add 1 packet of DO_3. Re-plug and shake to mix The fluff will dissolve and the sample may be yellowish.
5. Fill plastic tube with sample to the top, then empty into mixing bottle.
6. While swirling sample, add 1 drop of PAO at a time, until the sample is colorless.
7. Dissolved Oxygen is necessary for waterlife (fish, etc.) Each drop equals 1 mg/l DO. You should have no less then 12 drops.

_____drops of PAO = _____mgs./DO.

Hardness Test:

1. Fill plastic tube with water and pour into mixing bottle.
2. Add 3 drops of Hardness 1 and mix.
3. Add 1 drop of Hardness 2 and mix.
4. Add Hardness 3, 1 drop at a time until sample changes from pink to blue. (No more than 1 drop/second) DO NOT ALLOW dropper to touch the side of mixing bottle.
5. Hardness of water indicates presence of minerals in water. Number of drops equals amount of grains/gallon of Calcium Carbonate (a mineral). The more drops — the more minerals.

_____ __drops = _____grains/gallon Hi___lo___ mineral content.

pH test (hydrogen concentration):

1. Fill 2 glass viewing tubes to 5 ml mark with mater
2. Add 6 drops of PH indicator to one tube and swirl. Put this sample in right opening in color comparator.
3. Put tube of clear water in left side of comparator.
4. Hold comparator up to bright light. Rotate color disc until colors match. Read PH through window.
5. PH is the concentration of hydrogen gas in water. Without hydrogen there would be no living creatures, plants, etc. PH should be between 6.8 - 7.6 to be safe.

_____ = PH reading

Detergent test: Chloroform is poisonous - do not breathe or swallow.

1. Fill 1 test tube to upper mark with water.

2. Add 12 drops of Detergent test solution and mix.

3. Add Chloroform to lower mark, stopper and shake. (Chloroform will sink to bottom) Allow sample to stand and separate for 1 minute.

4. Using pipette, remove water from tube and discard.

5. Fill tube to upper mark with Wash Water Buffer, then remove the pipette.

6. Refill tube with Wash Water Buffer, stopper and shake for 30 seconds. Allow to stand for 1 minute to separate again.

7. Put test tube with sample in right opening of comparator.

8. Fill clean tube with demineralized water and place in left opening.

9. Hold Comparator up to a light. Rotate color disc until colors are matched. Read parts/million from scale window.

1.0. Amount of detergents in water is measured by milligrams/liter of water. Your test should not pass 1.0 mg/L. _____+mg/L.

EXPLORATION

The best thing in the world for each of us is that which we can best do, because it gives us the feeling of being useful --- that's happiness.

Pearl Buck
The Child Who Never Grew

Be careful what you set your heart upon, for it will surely be yours.

James Baldwin

Man goes beyond necessities to the very limits of possibilities because he wonders where those limits lie.

And behold, they don't lie anywhere because, like the horizon, they expand with every step he takes toward them.

Viktor Frankl

EXPLORATION

Who made my glasses?
Why am I so short and puny?
How would I know what to do if my Dad had a heart attack tonight?
When will someone teach me something about what's going on our there -- like getting a job?
Where could I find out more about helping other people -- like being a nurse?
What will school really do for me and my future.

These are typical questions that high school students ask. The answers to some are fairly simple, while others are far more complex in nature. All these questions have one element in common. They are questions of wonder -- of concern -- of some level of awareness. They are questions which indicate a desire to explore. This desire is one of the most important keys to all of education.

Exploration at Roosevelt is defined simply as probing and examining areas previously unknown. In the realm of health education, explorations range from: 1) exploring ourselves, 2) decisively using our present and developed skills to 3) real contacts in the 'outside world'. Explorations, individually, do not guarantee health education nor health career education success. They are merely a portion of a total plan of self concept, decision making and exploration.

The Health Career Exploration Project at Roosevelt found, quite early in the process of developing its curriculum approaches, two factors that governed its immediate progress. Had these factors not been acknowledged, dealt with and assimilated into the general plans, the exploratory experiences might have fallen short of the original intentions of integrating health career education into an existing health education curriculum. The first factor combined self concept

and decision making. To explain more thoroughly, until a student can understand and develop personal concepts of him or herself and utilize decision making skills, career decisions are impossible. Thus, the base to prepare health career exploration truly came in the areas of self concept and decision making. Both areas had to be emphasized so that explorations could occur. The second factor was that explorations had to be well planned and progressive in experience. Explorations had to be individually suited to meet student needs. They had to follow a building block plan to carry each student as far as his or her interests went; from very general to very specific, practical experiences (see diagram page 273).

How do health educators begin to move programs toward exploration possibilities?

First, <u>assessment of our knowledge</u>: Seeing what we know and don't know about the comprehensive field of health; looking, listening and asking questions.

Second, <u>assessment of our students</u>: by finding out their knowledges, their past experiences, their dreams, their goals and looking realistically at their future possibilities. Standardized assessment tools are not necessarily the best of devices to use. Questioning approaches with students (Who brings those services?, Where are they?) are helpful. Open approaches with students consist of questions like: "What kind of world do you want?", "What possibilities are open to you?", and "What are your limits?"

Third, assessment of resources, such as: community sources, sites, guest speakers, books, reference materials, scholarships, volunteer programs, supporative services, money, etc.

Once these assessments are made, real explorations can be set into motion. Some practical examples are:

1. Students are assisted to acquire information about themselves and their world through exploration (e.g., blood typing, examination fo beef hearts, ulcer effect experiments).

2. Acquisition of health skills enables students to explore issues of personal health concern (e.g., thermometer reading techniques; filling out medical history charts as first step in seeing a new doctor; charting correct personal vital signs for accurate comparisons and evaluation needed by health care workers).

3. Through standardized test procedures, students assess their career interests and abilities. Results help develop individualized exploratory experiences, (e.g., GATB).

4. In-class sources and resources are used to provide students with health career information (e.g., guest speakers, brown bag lunch meetings, "Career World," identification of health care workers and specialists, Career Information System computer).

5. Exploratory field experience exposures are provided for all students in the program. These exposures have been developed on a building block plan and are designed to carry students as far as their interests take them. For health career orientated students, these experiences give students real first-hand opportunities to do something about their intended goal.

Personal Exploration activities are designed to give students opportunities to look at themselves as individuals.

Testing activities generally are done by trained personnel or specialists. In these cases,however,students are trained to do their own testing and evaluation by working in partner teams.

Temperature, Pulse and Respiration activities have several purposes. In addition to skill building these activities are designed to develop student awareness and appreciation for health career employees. The act of charting is in itself a specific and meticulous skill.

Personality Traits and Matching Your Abilities are personal exploration also designed to develop awareness.

The personal Health charts and questionnaires are practical explorations. They are necessities when visiting a new doctor; and are useful tools for students to work through in the classroom. Also useful for the same purpose is a copy of Family Medical Record available from the March of Dimes.

SNELLEN VISION TEST Name_____

General information:
This is a test of visual acuity (sharpness). It is generally used as a screening device since it only determines the clearness with which you see. Undoubtedly you have seen or taken it before.

Procedure:
Stand twenty feet from the chart. Cover one eye with a piece of clean paper - do not press the covered eye. Try not to squint· try not to lean forward. Point in the direction you believe the big E is going as the tester identifies it for you.

You should be able to see the 20 line without difficulty. If you are unable to see the 20 foot line the tester will move up until a line is found which you can clearly see.

Test the other eye.

If you had difficulty with either eye, test both.

Record:

With Glasses

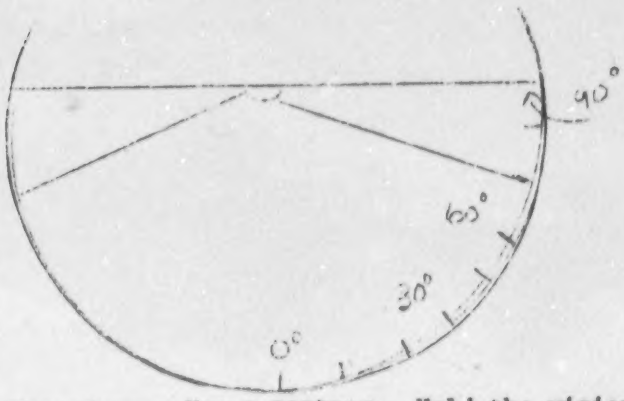
Right eye	Left eye	Both eyes

Without Glasses

Right eye	Left eye	Both eyes

PERIPHERAL VISION TEST / Testing the Field of Vision

Teacher Directions: Students can easily make a field-of-vision testing device by using a large piece of cardboard. The device should be built with degrees marked on it.



Procedure: Use a partner. Hold the vision guide by each handle and press lightly against the bridge of your nose. Have one person hold a pencil upright (vertically) at 0 degrees. Then move pencil to the right until it can no longer be seen. You must be looking straight forward at all times--do not move eyes. Record the approximate degree at which you can no longer see the pencil (on chart below). Repeat this for the other eye.

NOTE: The black line from 70° to 70° is the minimum (smallest) field of peripheral vision required by law.

RECORD:

Right eye_____ Left eye_____Total field (add R & L degrees)

If you have less than 70° on either side, test again. If it is the same, it may not be safe for you to drive.

BELTONE HEARING TEST Name_____

General Explanation:

This is a test of normal hearing abilities. It is used as a screening device, since it can only determine pitches of sound one can or cannot hear. This test does not tell if you have impaired hearing or why. You are tested for volume (loudness) of sound and frequency (hi-lo pitches) rate of sound.

Decibels are measurements of volume. Frequency rate is measured at cycles/second (how many times you hear the same sound per second).

Normal hearing in decibels, with slight background noise, is between 30 db - 20db at 1000 cycles/sec. Hearing below or above that indicates sensitive or deficient hearing in those ranges. Normal hearing for frequency rate is between 750 - 1500 cycles/sec.

Procedure:

Follow instructions from tester. If you have a cold, earache, or some disorder that affects your hearing, please tell tester. If you are waiting in line to be tested, PLEASE REMAIN QUIET. Do not leave until tester is through as you must test both ears. Give this sheet to tester, so he may record your scores. If you are not clear about the scores, ask for an explanation from your teacher or tester.

Decibels (volume)		Frequency (cycles/sec.)	
60 db:1 r	20 db:1 r	250:1 r	1500:1 r
50 db:1 r	15 db:1 r	500:1 r	2000:1 r
40 db:1 r	10 db:1 r	750:1 r	4000:1 r
30 db:1 r	5 db:1 r	1000:1 r	8000:1 r
Sensitive 1	r.	Sensitive ____	____
Normal ____	____	Normal ____	____
Deficient ____	____	Deficient ____	____

SPEECH EVALUATION TEST

Name_____

Tester_____

General information

This test will determine some of the sounds you may have trouble speaking. It does not tell you why or how to correct the difficulty. You will say groups of words that contain certain sounds the tester will be listening for. The tester will listen for 1) ommission (-)= sound not pronounced; 2) distortion (X)= sound pronounced but not clear; 3) stimulation (+)= sound is clear; 4) strength of voice= weak (hard to hear at 5 ft.), mild (can hear, but must strain), stron (can hear easily), strained (voice cracks or has trouble forcing words out).

Directions:

Fill in your name and tester's name. Give your chart to tester. Sit approximately 5 ft. apart. Say each group of words as their pictures are held in front of you. If you cannot identify a picture, skip it and mark 'skipped' on chart. You must do at least 3 of the 6 groups, including group E (ex, A,C,E or C,D,E). Go over each gourp only onee. Do not repeat any words. Tester will choose which groups to do, including E. *Tester: must mark omission, distortion or stimulation in column of strength of voice for each word.

Example:

		Strength of Voice			
Group O	Sound (letter)	weak	mild	strong	strained
1. monkey, hammer, broom	M			+	
2. nails, penny, lion	N		X		

**If you have read instructions and understand, then you may begin test with your tester. When done, switch places. If you have any questions, ask your teacher.

		Strength of Voice			
Group A	Sound (letter)	weak	mild	strong	strained
Monkey, Hammer, Broom	M				
nails, penny, lion	N				
pig, puppy, cup	P				
house, dog-house	H				
window, spider-web	W				
Group B					
boat, baby, bib	B				
cat, chicken, book	K				
girl, wagon, pip	G				
fork, telephone, knife	F				

Group C	Sound (letter)	Strength of Voice: weak	mild	strong	strained
1. yellow, onion	Y				
2. fingers, ring	NG				
3. dog, ladder, bed	D				
Group D					
1. lamp, balloon, ball	I				
2. rabbit, barn, car	R				
3. table, potatoes, coat	T				
4. shoe, dishes, fish	SH				
5. chair, matches, watch	CH				
6. drum, clock, blocks	BLENDS				
Group E					
1. vacuum, television, stove	V				
2. thumb, toothbrush, teeth	TH				
3. jumprope, juice, orange	J				
4. sun, pencil, bus	S				
5. zebra, scissors, rubbers	Z				
6. train, star, slide	BLENDS				
Group F					
1. this or that, feathers	TH				
2. scooter, snowman, dark	BLENDS				
3. measure, treasure	ZH				

BLOOD TYPING

This test will tell only the type of blood you have (A, B, AG, O) not the RH Factor (From: rhesus monkey; + or -). The test is quick and painless and you only need to use a small amount of blood.

FOLLOW INSTRUCTIONS CAREFULLY

1. Use a finger you do not use normally
2. "milk" the finger (force blood to tip by rubbing skin towards tip)
3. Teacher swabs fingertip with alcohol
4. Finish "milking" and hold finger still while teacher lances the tip
5. Drop blood on each side of slide (A/B) and apply cotton to finger

WHAT HAPPENS: Serum A is dropped on side A; Serum B on side B. The serum will coagulate the blood (form fine sand-like mixture with blood). If A coagulates, you have type A. If B = type B. If A and B = type AB. If neither does, you have type O.

Check (/) type of blood you have and read what it may do.

Type	O	A	B	AB
Donates to	O,A,B,AB[1]	A,AB	B, AB	A B
Receives from	O	O, A	O, B	O,A,B,AB[2]
Availability	most common[3]	fairly common	common	rare

1. Universal donor (may give to anyone)
2. Universal recipient (may receive from anyone (except AB - then may receive from Ab only)
3. In U.S. only; other areas of world are different(example) type B may be most common in China.

TEMPERATURE

The temperature is one of an individual's vital or life signs.

A basic way to determine the presence and seriousness of an illness is to take a person's temperature, using one of three types of fever thermometers. These are: the oral thermometer (the most commonly used); rectal thermometer; and the multi-use or stub type, which can be used orally, rectally or under the arm. The oral thermometer is the easiest to use.

Purchasing a Thermometer:

1. Ask the advice of your physician, nurse, or pharmacist as to brand and type.
2. Purchase the best thermometer, not the least expensive (prices range from less than $1.00 for the cheapest thermometer to about $4.00 for the most expensive ones). A good thermometer is accurate, will last a lifetime unless it is broken, and is well worth the additional cost.
3. Do not purchase a thermometer that comes with a chart showing corrections. A good thermometer does not have to be corrected.
4. Examine the thermometer carefully before buying. Make sure that it is easy to read the numbers and lines on the glass and that the glass and that the mercury column is clearly visible and unbroken.
5. Read the guarantee carefully.

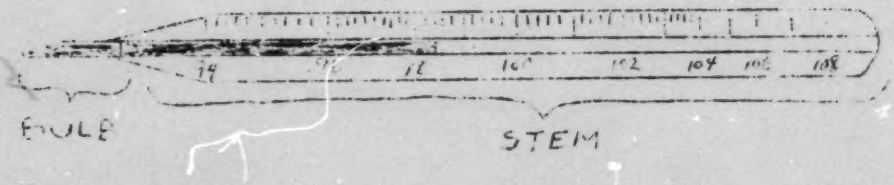
Taking the Temperature:

1. Before using a thermometer, disinfect it in rubbing alcohol or wash it thoroughly in soap and cool water. (Hot water may break it.)
2. Reduce the mercury level to a point well below 98.6°F. by holding the thermometer at the end opposite the bulb and shaking it downward sharply.
3. If an individual has been smoking or drinking hot or cold fluids, wait fifteen minutes before taking the temperature.
4. Place the bulb end in the mouth beneath the tongue and close the lips. Leave in place with the lips closed for three minutes.
5. Remove the thermometer, holding it by the stem. Wipe with cotton from the stem end toward the bulb end.

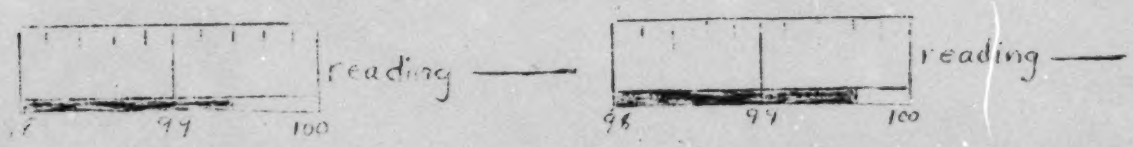
Reading the Thermometer:

1. Stand with your back to the light and hold the thermometer on the stem end at eye level.
2. Rotate the thermometer until you can see clearly the point at which the mercury column ends on the temperature scale.

3. Each long line indicates a one degree elevation in temperature. Only every other degree is marked with a number. In between each long line are four shorter lines. Each short line equals two-tenths (2/10 or .2) of one degree. The thermometer is 'read' at the point at which the mercury ends.



On the following two diagrams, try to read the thermometer and record it.



4. Now take your own temperature (following directions given before). After reading the thermometer, wash it with soap and water. Then place it in the test tube filled with alcohol. Mark the <u>exact time</u> that you placed it in alcohol and place in front of the test tube.

*NOTE: A thermometer <u>must</u> be in alcohol twenty minutes <u>before</u> being used again.

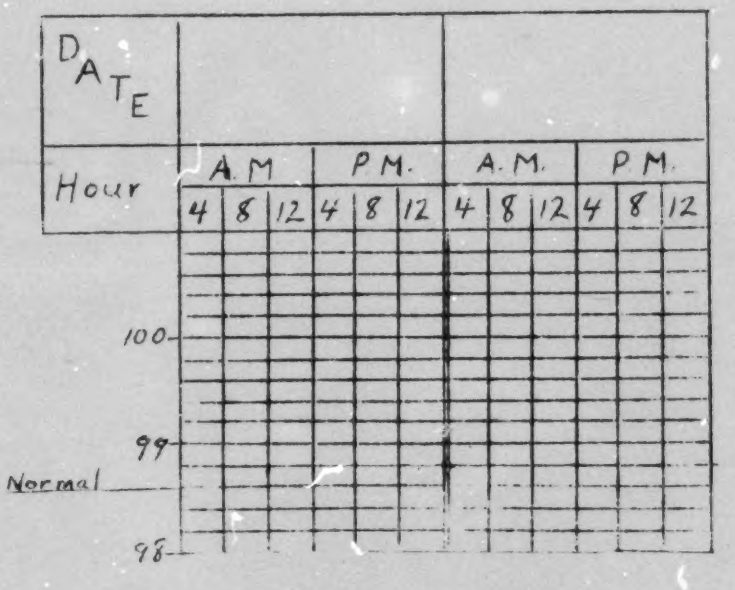
<u>Charting the Temperature</u>:

1. Doctor's offices and hospitals keep graphic charts for recording temperatures. It is important that these records be accurate and readable so they can be used effectively by doctors, nurses, or other health care workers.

2. To chart accurately, draw a solid dot on the lines which correspond to the readings and to the closest time the reading was taken.

On the diagram below, chart these temperatures for yesterday and today:

Yesterday: 8 a.m. - 98.8; 8 p.m. - 99.8
Today: 8 a.m. - 99.0; 8 p.m. - 99.6



Now connect the dots with straight lines. The graph will then show an accurate picture of temperature changes.

On the large Graphic Chart record your temperature, taken during class, on four consecutive days.

GRAPHIC CHART

Name _____ Dr. _____

Month _____

DATE																								
HOUR	A.M.			P.M.			A.M.			P.M.			A.M.			P.M.			A.M.			P.M.		
	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12
106																								
105																								
104																								
103																								
102																								
101																								
100																								
99 NORMAL TEMP.																								
97																								

PULSE

The pulse is one of an individual's vital or life signs.

The pulse is the pressure of the blood felt against the wall of arteries as the heart alternately contracts and relaxes. This pulse can be felt anywhere in the body where there is an artery close to the surface, and where it can be squeezed against a bone by the fingers.

The Pulse as an Indicator

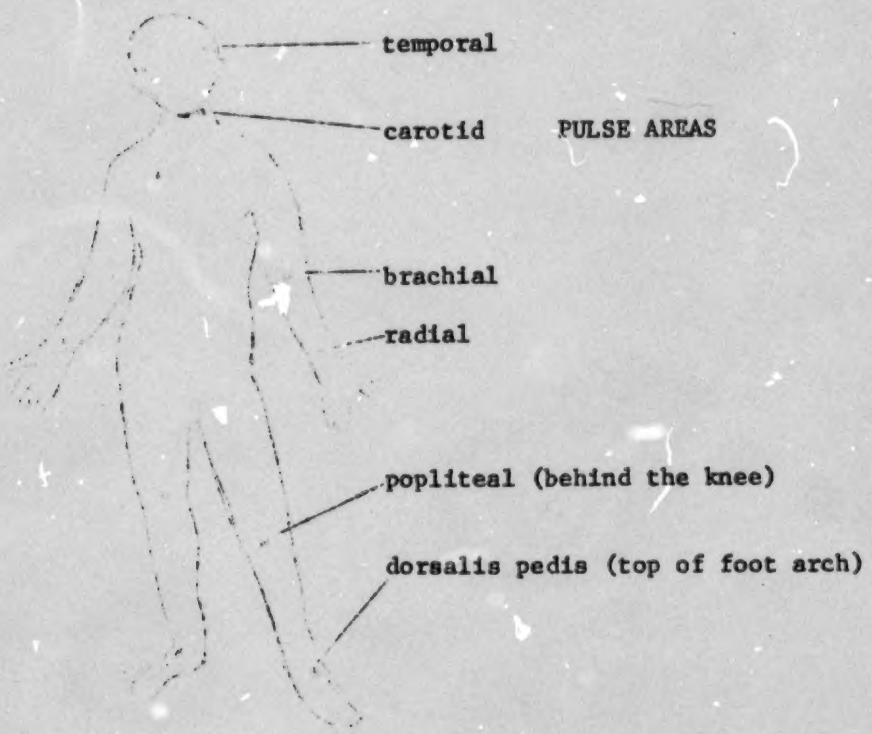
The average pulse rate is 72 beats per minute. Pulses that are too fast or too slow, too strong or too weak can give doctors an indication of the condition of the circulatory system. Pulse rates vary from person to person and change according to the activity level---- very slow during sleep and very rapid during strenuous exercise.

Taking the Pulse

1. Using the fingers, the pulse can easily be found at the sides of the neck, at the temples and on the thumb side of the wrist. (Other pulse areas can be seen in the diagram below)

2. Generally the pulse is taken over the radial artery.

3. The pulse rate is found by counting the number of throbs felt per minute. A shorter way would be to count for thirty seconds and then to multiply by two.



4. Take your pulse for one minute and record it in the space to the right. _____

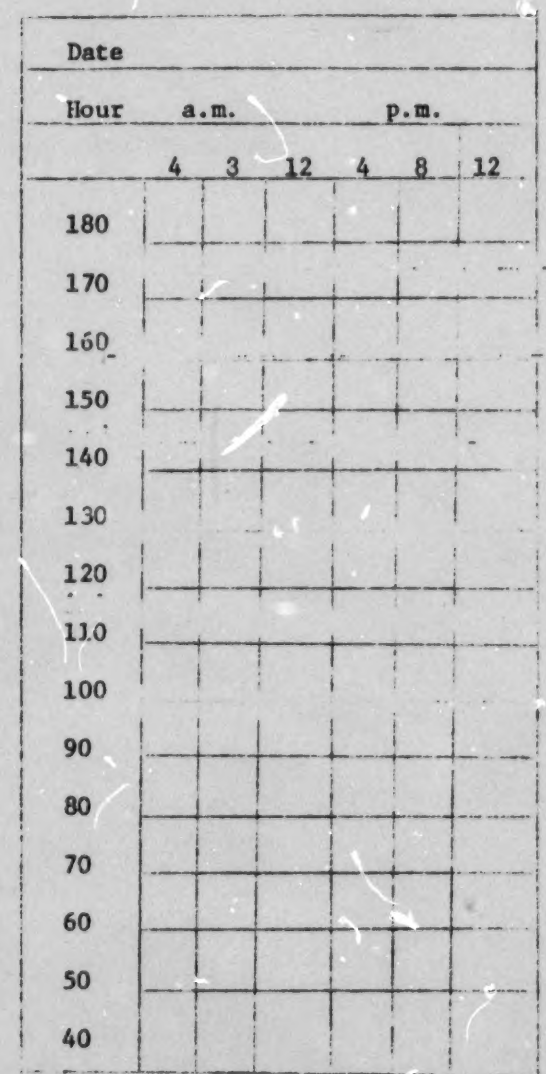
5. Wait a full minute. Take your pulse for one minute and record it again. _____

6. If #4 and #5 are not the same continue the procedure until you get two similiar counts.

Charting the Pulse

1. Persons who work in medical services generally keep graphic charts for recording pulses. It is important that these records be accurate and readable so they can be used effectively by doctors, nurses, or other health care workers.

2. Chart your pulse on the graph below. Remember to chart accurately, draw a solid dot on the lines which correspond to the readings and to the closest time the reading was taken.



RESPIRATION

Respiration is one of an individual's vital or life signs.

The main function of respiration is to supply the cells of the body with oxygen and to rid the body of carbon dioxide.

There are two parts to each respiration -- inhalation (taking in) and exhalation (giving off).

The Respiration as an Indicator

The average adult respiration rate is between fourteen and eighteen counts per minute. Health care workers are interested in both the character of respirations as well as the rate. Respirations are described as being normal, shallow, deep, labored or difficult. The type of activity or degree of illness of a person will in part determine the character of his respiration.

Counting the Respiration

1. The respiration rate is determined by counting the rise and fall of the chest for a one minute period.

2. If the rate you count is more than twenty-five per minute, it is said to be accelerated.

3. Count your respirations for one minute and record it in the space provided. _____

4. Wait a full minute. Count your respiration again for one minute. Record_____.

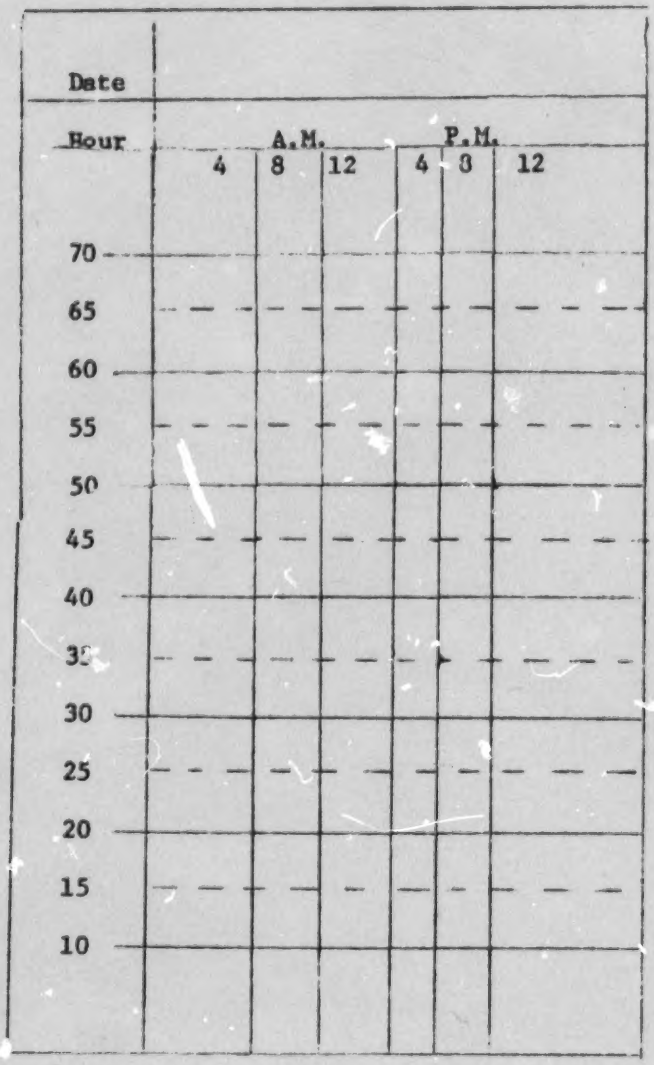
5. If #3 and #4 are not the same continue the procedure until you get two similiar counts.

Charting the Respiration

1. Persons who work in medical services generally keep graphic charts for respiration recording. It is important that these records be accurate and readable so they can be used effectively by doctors, nurses, or other health care workers.

2. Chart your respiration on the graph on the next page. Remember to chart accurately, draw a solid dot on the lines which correspond to the readings and to the closest time the reading was taken.

NOTE: Since people can voluntarily control a portion of their respiration, most health care workers usually count both the pulse and respiration at the same time. This way the patient is unaware that their respiration is being counted.


Date
Hour
A.M.
P.M.
4
8
12
4
8
12
70
65
60
55
50
45
40
35
30
25
20
15
10

Earlier you learned to accurately take your pulse and respiration rates. Also you learned to record them on a graphic chart.

This experiment is designed to illustrate the changes which take place in the circulatory and respiratory systems as a result of activity.

Examine the Chart

1. Look over the chart on the next page. You will notice that both pulse and respiration are to be recorded on one chart.

2. For this experiment only you will need to record your pulse rates with a solid dot ( ) and connect your solid dots with a solid line( ).

3. For this experiment only you will need to record your respiration rates with an x (x) and connect your x's with dotted lines (- - -).

4. See the example below:

Experiment Procedures

1. Select a partner who will assist you in this experiment (step 3&4)

2. Step 1: Sit quietly for five minutes.
Count your own resting pulse for twenty seconds.
Multiply your pulse rate by three and record on the graphic chart.

Next count your respiration rate for twenty seconds.
Multiply your respiration rate by three and record on the graphic chart.

3. Step 2: Stand and take your pulse for twenty seconds.
Multiple your pulse rate by three and record on the graphic chart.

Next count your respiration rate for twenty seconds.
Multiply your respiration rate by three and record on the graphic chart.

4. Step 3: Jog up and down the stairs once.
Count your own pulse for twenty seconds.
Multiply your pulse rate by three and record on the graphic chart.

While you are counting your pulse your partner will count your respirations for twenty seconds.
Multiply your respiration rate by three and record on the graphic chart.

5. Step 4: Jog up and down the stairs three times without rest.
Follow the same procedure as step 3 above.

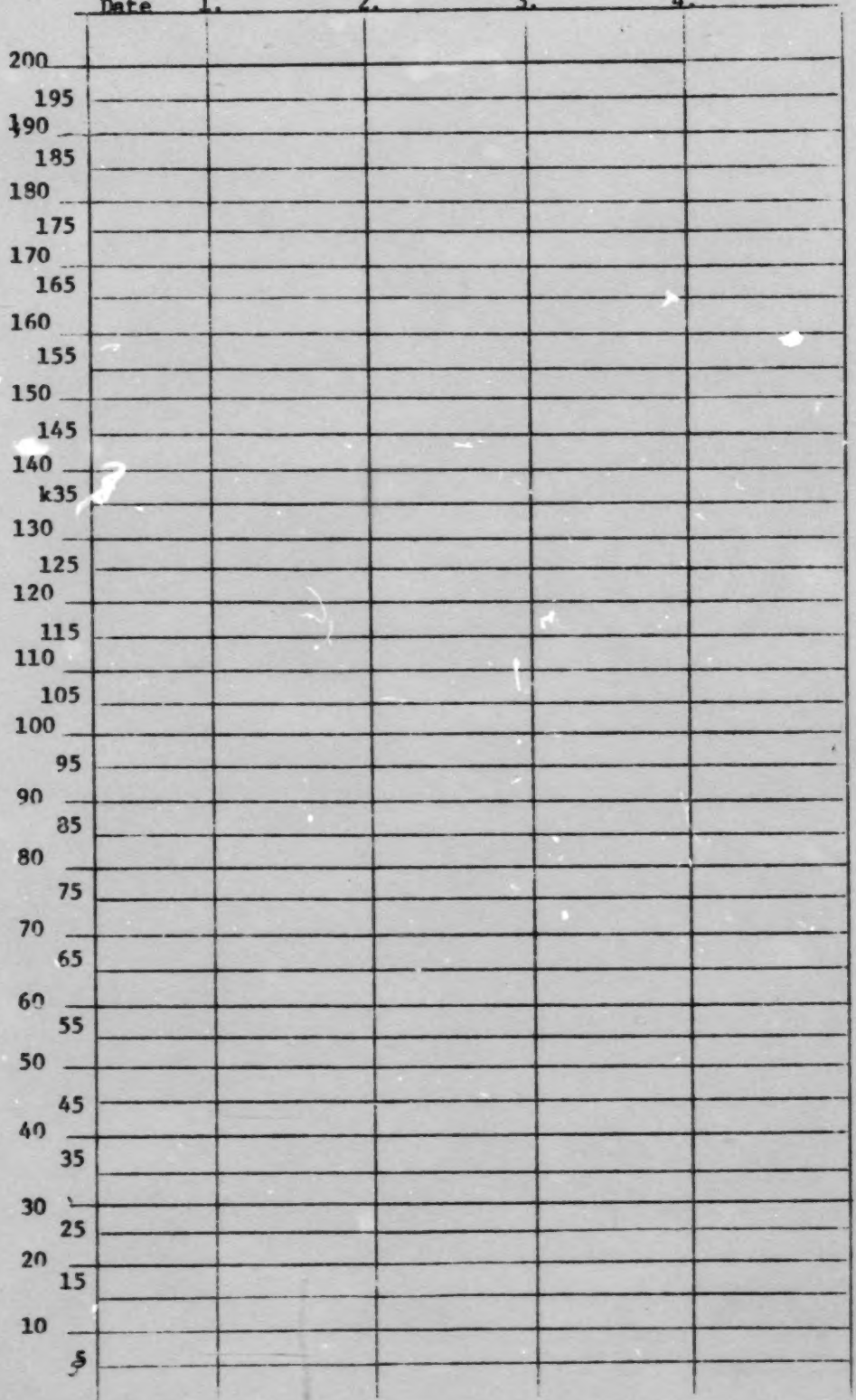
6. Switch partners and repeat entire experiment.

GRAPHIC CHART

Circulation and Respiration

Name_____

Date 1. 2. 3. 4.



Personality Traits Name_____

Listed below are personality traits which are considered to be important for success on a job and in relationships with other people. You will receive three copies of this sheet. Copy #1: This is YOUR copy to fill out as you see yourself. Ratings are from 1 to 5 with 1 being "Almost never" and 5 being "Almost always". Circle the number which is your estimate after the personality trait. Copy #2 is intended for your parents to complete. Copy #3 is for a friends to complete. When the three sheets have been completed, compare the results and find areas where you and your parents and your friend disagree. Keep these sheets for your records. On the back of copy #1 explain any comparisons which you can.

I am:

1. Alert	1 2 3 4 5	15. Patient	1 2 3 4 5
2. Appropriately dressed.	122 3 4 5	16. Persistant	1 2 3 4 5
3. Careful to avoid bad language	122 3 4 5	17. Pleasant	1 2 3 4 5
4. Cheerful	1 2 3 4 5	18. Poised	1 2 3 4 5
5. Confident	1 2 3 4 5	19. Punctual	1 2 3 4 5
6. Cooperative	1 2 3 4 5	20. Quiet	1 2 3 4 5
7. Courteous	1 2 3 4 5	21. Reliable	1 2 3 4 5
8. Friendly	1 2 3 4 5	22. Self Controlled	1 2 3 4 5
9. Helpful	1 2 3 4 5	23. Self reliant	1 2 3 4 5
10. Honest	1 2 3 4 5	24. Sincere	1 2 3 4 5
11. Loyal	1 2 3 4 5	25. Sympathetic	1 2 3 4 5
12. Modest	1 2 3 4 5	26. Tactful	1 2 3 4 5
13. Neat	1 2 3 4 5	27. Thorough	1 2 3 4 5
14. Optimistic	1 2 3 4 5	28. Trustworthy	1 2 3 4 5

MATCH YOUR ABILITIES TO CAREERS IN HEALTH

What are your abilities?

What are your interests?

What are your likes and dislikes?

Have you ever stopped to list the many things you can do well, or those activities that you like? Have you ever thought about the things that interest you? What are your likes and dislikes?

There are many things you like to do. For example, there are schoolmates you prefer to be with that you like, and probably others that you dislike. You have favorite T.V. programs, and favorite movies. Certainly, you have favorite sports and recreational activities. There are certain books that you like to read, others you don't. There are some chores you don't mind doing around the house, and others that you detest.

Why do you like some things and not others?

Why do you have certain abilities that you consider your strong points?

Why are you interested in certain activities and not in others?

The answers to these questions will help you to choose a future career. It is important to begin knowing yourself, for in knowing yourself, you can channel your abilities, interests and likes into career choices. A choice that allows you to make the best use of your strengths and interests will be a wise choice of career. Such a choice will provide you with inner satisfactions because you will be doing things that interest you, or in which you are good!

The following questions are designed to give you some insight into yourself.

After each question, you will find four (4) choices of possible health careers that fit the interest or ability found in the question. Select the best choice for each question and write it in the space provided beneath the question.

In the column at the right, next to each statement, headed, "My Interest or Ability," place a check (√) if that question suits your own interest, like or ability. (*Note: There may be more than one correct answer to a question.)

MY INTEREST OR ABILITY
(check)

1. I write well and get good marks on my class compositions. I enjoy writing letters to friends. _____

PUBLIC HEALTH INFORMATION SPECIALIST
CYTOTECHNOLOGIST (study of cells)'
SCIENCE WRITER
SANITARY ENGINEER

2. I am a pretty fair athlete and perhaps may be on the school's varsity team. I enjoy coaching grade school children in sports and athletics. _____

SCHOOL HEALTH EDUCATOR
RECREATIONAL THERAPIST
DIETITIAN
PHYSICAL THERAPIST

3. I can draw and sketch well. Some of my drawings in the Science Class, or art class have been praised. _____

STATISTICAL CLERK
WARD CLERK
MEDICAL ILLUSTRATOR
OCCUPATIONAL THERAPIST

4. I like to read about science subjects, and the accomplishments of scientists. I like handling scientific equipment and trying out experiments on my own. _____

MEDICAL LIBRARIAN
REGISTERED NURSE
BIOLOGICAL RESEARCH TECHNICIAN
AMBULANCE ATTENDANT

5. I like to create things in the school shop. I enjoy industrial arts projects and help out with repairs at home. _____

ORTHOPEDIC APPLIANCE MAKER
HOSPITAL BUILDING MAINTENANCE WORKER
MEDICAL ASSISTANT
INHALATION THEREAPY AIDE

MY INTEREST OR ABILITY (check)

6. I keep the class materials well organized and neat. I am good at figures. _____

BLOOD BANK TECHNOLOGIST
MEDICAID AND MEDICAIRE CLERK
WARD CLERK
LICENSED PRACTICAL NURSE

7. I have a great deal of patience and compassion for those not as fortunate as myself. I like helping such people _____

REGISTERED NURSE
STATIONARY ENGINEER
STATISTICIAN
PSYCHIATRIC SOCIAL WORKER

8. I do my best work in quiet orderly surroundings such as in the library or certain places at home. I like handling details which involve looking up facts in books. _____

COMPUTER PROGRAMER
MEDICAL RECORDS LIBRARIAN
OUT-PATIENT ASSISTANT
CLERK IN BUSINESS OFFICE

9. I work best when I am under pressure. When I take examinations, I usually do very well. _____

AMBULANCE ATTENDANT
EMERGENCY ROOM ATTENDANT
INTENSIVE CARE UNIT
OPERATION ROOM ATTENDANT

10. I have good work habits, follow directions well and generally observe rules when they are set for the welfare of the majority of the school. _____

JUNIOR ACCOUNTANT - BUSINESS OFFICE
ENVIORNMENTAL RESEARCH AIDE
HISTOLOGIC LABORATORY AIDE
HOSPITAL PERSONNEL DIRECTOR

MY INTEREST OR ABILITY (check)

11. I get tense at times under pressure, but I am calm in most situations. _____

MEDICAL RECORDS LIBRARIAN
HOSPITAL CASHIER
HEAD REGISTERED NURSE
HOSPITAL ADMITTING OFFICE CLERK

12. I like music, both listening and playing. My hobbies are generally of an artistic nature. _____

RECREATION THERAPIST
NURSERY SCHOOL COUNSELOR
X-RAY TECHNICIAN
HEMATOLOGIST ASSISTANT

13. I like to "fool around" with cars, motor bikes and gas engines. _____

HOSPITAL MAINTENANCE AND REPAIR WORKER
AMBULANCE ATTENDANT
STATIONARY BOILER ENGINEER
BACTERIOLOGIST ASSISTANT

... I enjoy taking a radio or T.V. apart and fixing broken electronic gadgets. _____

ELECTROCARDIOGRAPH TECHNICIAN
COMPUTER PROGRAMMER OR ANALYST
MEDICAL ENGINEERING TECHNICIAN
HOSPITAL RECEPTIONIST

15. I enjoy cooking interesting means for my family and friends. _____

NUTRITIONIST
CHEF'S HELPER
DIETITIAN
DIETARY AIDE

16. In "rap" sessions with my friends, I enjoy discussing ecological problems. I like activities that attempt to do something to improve the world. _____

ORTHOPEDIC APPLIANCE MAKER
PUBLIC HEALTH EDUCATOR
FOOD AND DRUG INSPECTOR AND ANALYST

MY INTEREST OR ABILITIES
(check)

17. I enjoy dramatics, dramatic art, radio and television classes. People say I am a natural actor. _____

HOSPITAL PUBLIC RELATIONS OFFICER
MEDICAL RECEPTIONIST
ADMITTING OFFICER
MEDICAL SOCIAL WORKER

18. I like to write for my school newspaper or literary editor. _____

MEDICAL SCIENCE WRITER
PUBLIC HEALTH INFORMATION SPECIALIST
HEALTH EDUCATOR
DRUG RETAIL SALESMAN

19. I'd like to make money right away and become independent. _____

PHARMACEUTICAL PRODUCTS SALESMAN
NURSE'S AIDE
PORTER
ACCOUNTANT

20. I am considered a good mixer and enjoy being popular. _____

PUBLIC RELATIONS OFFICER
PSYCHOLOGIST
DENTAL ASSISTANT AND SECRETARY
DIRECTOR OF HOSPITAL VOLUNTEER SERVICES

21. I like the challenge of learning new things in the scientific world. _____

MEDICAL RESEARCH SPECIALIST
DOCTOR OF MEDICINE
RADIOLOGIST
BASIC RESEARCH IN ENVIRONMENTAL HEALTH

MY INTEREST OR ABILITY
(check)

22. I like to be the leader of my "crowd" and generally take over when tough decisions have to be made. _____

HOSPITAL MEDICAL DIRECTOR
EXECUTIVE HOUSEKEEPER
DIRECTOR OF BUILDINGS AND MAINTENANCE
INDUSTRIAL HYGIENIST

23. I like the idea of being thought of as a "big brain". I enjoy tough school subjects such as mathematics, chemistry and biology. _____

ENVIRONMENTAL RESEARCH SPECIALIST
MEDICAL ELECTRONICS SPECIALIST
PHARMACY AIDE
CHIEF PURCHASING OFFICER

24. I like to communicate and share my ideas with other people. _____

PUBLIC HEALTH EDUCATOR
PSYCHOLOGICAL SOCIAL CASE WORKER
PATHOLOGY LABORATORY TECHNICIAN
SAFETY ENGINEER

25. I like to work with children and enjoy telling stories and playing games with them. _____

PEDIATRICIAN
NURSERY SCHOOL COUNSELOR
PEDIATRIC WARD NURSE
SPEECH PATHOLOGIST

IF YOU HAVE PLACED A CHECK IN THE RIGHT HAND COLUMN ("MY INTEREST OR ABILITY") ON THE FOLLOWING LINES WRITE THE POSSIBLE CAREERS FOR WHICH YOU WOULD BE SUITED.

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

FITNESS EXPERIMENT/Chair Test

Teacher Directions- This is a brief, quick and easy to do fitness test, which is ideal for classroom use. It is designed to indicate whether an individual is in good enough shape to participate in strenuous activity or whether a conditioning program might be advisable.

Procedure - Use a study chair with a seat fifteen to seventeen inches off the floor. You need a partner who will hold the chair steady; and a visable watch or clock with a second hand

Step up onto the chair, straighten your legs, and then step down. Repeat this procedure for at least two minutes -- making certain you make thirty cycles a minute.

"After you stop, sit down and relax for a minute. Then take your pulse for thirty seconds. Double the number of beats. In order to pass you must get a total of less than 100 beats."

TODAY'S HEALTH May, 1972

PERSONAL HEALTH TEST QUESTIONS Name_____

___1. Have you had a physical checkup within the past year?

___2. Do you floss your teeth at least once a day?

___3. Have you seen a dentist within the past year?

___4. Do you smoke more than half a package of cigarettes a day?

___5. Do you take any medication?

___6. Do you usually take amphetamines or tranquilizers to get through a day?

___7. Can you name four of the seven cancer warning signals?

___8. Have you had your eyes checked within the past year?

___9. Is your diet well-balanced?

___10. Do you wear ill-fitting or run-down shoes?

___11. Do you get enough sleep at night?

___12. Do you get more than your share of colds?

___13. Are you more than ten pounds overweight?

___14. Do you get enough exercise daily?

___15. Are you underweight?

___16. Are you a safe and courteous driver?

___17. Are you nervous or anxious most of the time?

___18. Are you depressed most of the time?

___19. Are you relatively at ease when meeting new acquaintances?

___20. Do you know your blood type?

___21. Do you brush your teeth at least once a day?

___22. Do you squeeze pimples and blackheads?

___23. Do you bite your nails?

WOMEN ONLY

___24. Do you have a Pap smear once a year?

___25. Do you check your breasts at regular intervals?

PERSONAL HISTORY QUESTIONNAIRE

206
(2)

Please Answer All Questions Completely

Patient's Name_____ Birth Date_____ Sex_____

Address - Street_____ Zip Code_____ Single_____

Married_____

Divorced_____

City_____ Phone_____ Widowed_____

Social Security Number_____

Patient's Employer_____ Occupation_____ How Long_____

Address_____ Phone_____

Do You Have Insurance_____ Yes_____ No Insurance Co._____

Policy No._____

Person Responsible For the Bill: (Full Name of Husband, Father or Responsible Party)

Name_____ Phone_____

Address_____ Occupation_____

Employer_____ Phone_____

Insurance Co._____

Policy No._____

IN CASE OF EMERGENCY NOTIFY (other than husband or wife)

Name_____ Address_____ Phone_____

IS THE PATIENT ALLERGIC TO ANY DRUGS OR MEDICATIONS?_____ Yes_____ No

Which Ones?_____

PERSONAL HISTORY

NAME _____ BIRTH DATE _____ 207 (3) SEX _____

RELIGION _____ S M D W OCCUPATION _____

FAMILY HISTORY	ALIVE	STATE OF HEALTH	DECEASED	CAUSE OF DEATH	TBC	MIGRAINE
FATHER					HCVD	NEURO
MOTHER					CA	GI
BROTHERS					DIABETES	BLOOD
SISTERS					ALLERGY	

G PAV. PARA: MENARCHE: LNMP DAYS PADS MENOPAUSE

CHILDREN

WHOOPING COUGH TBC HIVES JAUNDICE

PNEUMONIA ASTHMA RHEUMATIC FEVER ENCEPHALITIS

PLEURISY HAYFEVER ST. VITUS DANCE KIDNEY INFECTION

MEDICAL HISTORY:

SURGICAL HISTORY

ORTHOPEDIC HISTORY:

HABITS:

TOBACCO HOURS WORKING DIET SENSITIZATION

ALCOHOL SLEEP HOBBIES ALLERGIC TO DRUGS

TEA INSOMNIA EXERCISE

COFFEE HOME CONDITION VACATION

PRESENT ILLNESS:

208 (4)

The Family Medical Record: A Step toward Better Health

By VIRGINIA APGAR, M. D., M. P. H.
Vice President for Medical Affairs
The National Foundation-March of Dimes

You can plan for better medical care. A famous authority on the health of the newborn tells how to start now by keeping careful, comprehensive records using a form especially developed for Woman's Day readers.

Evelyn Morris thought it odd that the eye specialist she had consulted about a problem with her contact lenses seemed much more interested in her grandmother.

Evelyn had worn contacts successfully for several years until, shortly after moving to a strange city, she began to have intermittent pains in her eyes.

Referred by a friend to the ophthalmology department at a nearby university medical center, she had just completed a battery of tests. And now the doctor was urging her to probe her memory about her family, especially her mother's mother, who had been blind in her last years.

"When I was quite young, Grandmother was in the hospital one summer to have cataracts removed," Evelyn recalled. "It must have been unsuccessful, because her vision failed rapidly after that."

"Was glaucoma ever mentioned?" the doctor asked.

"Not that I can recall," she replied.

"It would be helpful if we knew," he said. "The preliminary tests indicate that the pressure of fluid circulating in your eyes is slightly higher than normal. It could be a very early symptom of glaucoma. If it is glaucoma, you're at such an early stage no damage has yet been done. Preventing future damage should be possible with simple medication. Knowing more about your grandmother's history might help confirm the diagnosis without the risk of waiting to see whether your pressure increases."

Evelyn agreed to write her mother before her next appointment. The reply came quickly:

Dearest Evelyn,

You were too young to understand the family conversations about Mama's eyesight, but she did indeed have glaucoma. Her sight was failing long before the cataracts developed, though it wasn't until then that anyone diagnosed it as glaucoma.

Your query was distressing, especially since it brings up something I probably should have mentioned long before. When I saw Dr. Jenkins for new glasses four years ago, he prescribed drops to "relieve some mild pressure" in my eyes. He didn't give it a name, and I certainly didn't associate it with Mama's condition. But he checks the pressure each time he checks my glasses and has kept up the prescription. It does sound as though it's part of the pattern, except that in my case it showed up much later in life than it seems to have in yours.

If it should turn out that you have inherited the trait, thank heaven your doctor has caught the symptoms so soon. You're very lucky that the minor lens problem called attention so early to something potentially much more serious. Dad and I will be anxious until we hear the results . . .

The letter's contents, along with laboratory reports from earlier tests, helped confirm the diagnosis. Ten years later, on a regimen of special eye drops daily and regular checkups, there has been no loss of vision and none is anticipated.

"That experience taught me a lesson," Evelyn declares. "I've made sure that my children understand their risk of developing glaucoma, and why regular eye examinations will be essential all their lives, especially as they approach the age of forty."

As a broader result, Evelyn realized there might be other information in her family health history, as well as that of her husband, that they should know. Since then, she has accumulated a wealth of data that might someday eliminate a need for time-consuming medical detective work, or provide guidance for accurate diagnosis through future years and even future generations.

YOUR FAMILY MEDICAL RECORD Although a family health record may be started at any time, the ideal time is before you start your family or even before marriage. Greater accuracy is possible when the recollections of parents and relatives are fresh and when the exact nature of illnesses or chronic disorders can be verified by attending physicians.

The *Woman's Day* "Family Medical Record," which is reprinted here, is designed to help you start your own family health record at the start of a new year. We at The National Foundation-March of Dimes, an organization that works to prevent birth defects, were delighted when the editors of *Woman's Day* asked us and the AMA to devise a format that would include all the data vital to the health of today's children and tomorrow's. The form that we've come up with is clear and simple enough to be self-explanatory, but I'd like to give you a little more of the inside story on what the information included in it can mean to you and your doctor.

FAMILY HEALTH HISTORY In the "Family Medical Record," space is provided to record basic data about your immediate (continued)

Family Medical Record

A simple, comprehensive format for keeping vital family-health information organized and ready for the times when you need to have it at your fingertips. Faithfully kept, your family medical record will not only help you with school and travel records, insurance forms and routine medical consultations, but can also prove a valuable diagnostic tool for your physician and an important legacy for your children.

For an in-depth explanation of the uses of a family medical record by Dr. Virginia Apgar of The National Foundation-March of Dimes, please turn the page.

IMPORTANT TELEPHONE NUMBERS

Physicians:
Dr._____
Dr._____
Dr._____
Dr._____
Dentists:
Dr._____
Dr._____
Pharmacist_____

Police Emergency_____
Fire Emergency_____
Ambulance Service_____
Poison Control Center_____
Health Department_____
Health Insurance Agt._____
Medicare Information_____
Medicaid Information_____
Local Medical Society_____

FAMILY HEALTH HISTORY

Information about the health of your immediate family can prove helpful in early diagnosis and treatment of diseases that are known either to be genetic or to occur more commonly in some families. Make a note of any serious or chronic diseases in your family, with special attention to those listed at the right. It also helps to note the age when the disease first occurred.

Be sure to include:
- Allergies
- Arthritis
- Cancer
- Diabetes
- Epilepsy
- Hearing defects
- Heart defects
- Hypertension
- Mental illness
- Mental retardation
- Obesity
- Tuberculosis
- Visual defects
- Other recurring family diseases

NAME	BIRTH DATE	BLOOD TYPE & Rh	OCCUPATION	DISEASES, ETC.	IF DECEASED, AGE AND CAUSE
HUSBAND					
his father					
his mother					
brothers and sisters					
WIFE					
her father					
her mother					
brothers and sisters					

Designed by The National Foundation-March of Dimes in collaboration with the American Medical Association and Woman's Day.

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218

209 (5)

CHILDREN'S BIRTH RECORD

Be sure to note such details as duration of pregnancy, length of labor, Cesarean delivery, use of forceps, newborn respiratory distress, jaundice or birth defects. If you are Rh-negative and the child was Rh-positive, were you given the Rh vaccine?

NAME	DATE	SEX	WT	BLOOD TYPE & Rh	APGAR SCORE	HOSPITAL, CITY	PHYSICIAN	DETAILS

INCOMPLETE PREGNANCIES

A complete reproductive history includes details of spontaneous or induced abortions, miscarriages and stillbirths. If you are Rh-negative and the fetus was Rh-positive, whether or not you were given the Rh vaccine is relevant here, too.

TERMINATION	DURATION	CIRCUMSTANCES	TERMINATION	DURATION	CIRCUMSTANCES

IMMUNIZATION SCHEDULE AND RECORD

The American Academy of Pediatrics recommends that children be immunized and given tuberculin testing according to the immunization schedule below. Vaccine combinations and schedules are improved frequently, however, so your physician can recommend what is best for you. As each immunization is completed, it should be registered in the immunization record, also below.

IMMUNIZATION SCHEDULE

2 months	Diphtheria/Tetanus/Pertussis (whooping cough) vaccine, first shot; polio vaccine, first dose	1-12 years	Rubella (German measles) vaccine
		15-18 months	Polio booster; DTP booster
3 months	DTP, second shot	4-6 years	Polio booster; DTP booster
4 months	Polio vaccine, second dose; DTP completed	12-14 years	Tetanus/diphtheria toxoid (adult form); mumps vaccine
6 months	Polio vaccine completed		
12 months	Tuberculin test; rubeola (measles) vaccine	Thereafter	Tetanus/diphtheria toxoid every 10 years

IMMUNIZATION RECORD

Enter month and year of completed series, boosters, single immunizations

IMMUNIZATIONS	CHILD	CHILD	CHILD	CHILD	CHILD	MOTHER	FATHER
DTP completed							
boosters							
polio completed							
boosters							
tuberculin test							
rubeola (measles)							
rubella (German measles)							
tetanus/diphtheria toxoid							
mumps							
other							

PERIODIC PHYSICAL EXAMINATIONS

NAME	DATE	PHYSICIAN/CLINIC	HT.	WT.	BLOOD PRESSURE	FINDINGS, ADVICE OR INSTRUCTIONS

INDIVIDUAL PROBLEMS, MEDICATIONS, ALLERGIES

Note any medications that are taken regularly; any substances that must be avoided for medical reasons; and any allergies.

NAME	CONDITIONS	SPECIAL INSTRUCTIONS OR MEDICATIONS

RECORD OF FAMILY ILLNESSES

List accidents, surgery and illnesses, including chicken pox, mononucleosis, hepatitis, measles, German measles, mumps, strep throat and whooping cough. If there was surgery, specify what was repaired or removed and note X rays taken, medications and diet.

NAME	DATE	NATURE OF ILLNESS, INJURY OR SURGERY	PHYSICIAN	OFFICE, CLINIC, HOSPITAL	TREATMENT

HEALTH AND ACCIDENT INSURANCE INFORMATION

NAME	POLICY NUMBER	DATE ISSUED	COMPANY	TYPE OF COVERAGE	PREMIUM	PAYMENTS REC'D	PAYMENTS REC'D

219

THE FAMILY MEDICAL RECORD

family and your husband's, since many conditions may follow a definite genetic pattern, and others tend to occur more frequently in some families than in others. Awareness of a disease like this in one member of a family may alert a doctor to early symptoms in time to avert advanced disease or disability in another. The age of the family member when the disease first appeared is relevant to the form or severity of some disorders and should be recorded. So should his occupation, since some occupations expose workers to environmental factors that affect health. For example, a brother-in-law's chronic lung condition might be related to asbestos inhaled in his work at construction sites; someone else's sterility might be related to work involving exposure to radiation.

Remember, too, that a history of good health is medically pertinent. If your father has "never known a sick day in his life," that's worth recording.

CHILDREN'S BIRTH RECORD. Even though you may keep individual books for each child's early milestones, details of your children's births should be carefully noted in your family medical record as well.

Many hospitals are now giving parents little booklets that include this sort of information on their newborn baby. These usually include the Apgar score, which was developed out of my experience as attending anesthesiologist at more than seventeen thousand deliveries at Columbia-Presbyterian Medical Center in New York City. It rates newborn respiration, muscle tone, reflexes, heart rate and color on a scale of zero to two for a maximum score of ten points, and is simply a quick check one minute after birth to determine whether the newborn baby needs special attention in the delivery room. But sometimes this score will also provide a clue to some difficulty the child may have later in life, and for that reason you'll want to include it in your record. If your obstetrician didn't tell you your child's score, ask him for it.

INCOMPLETE PREGNANCIES. When a woman conceives, her system undergoes a series of changes that make their mark on her overall personal health history. This is true whether she delivers a liveborn infant at term or miscarries in an early month. Family planning and understanding of the health of subsequent children should be based on knowledge of her entire reproductive history.

RECORD OF IMMUNIZATIONS. In their fascination with every milestone a first baby passes, young parents often think they'll never forget the howl Johnny put up at his first DTP shot, or six-year-old Janie's struggle to comprehend why she had to have a rubella vaccination to keep Mommy from catching a rash that might hurt the baby in Mommy. But time has a way of blurring total recall, so keep a record of every inoculation of every family member.

PERIODIC MEDICAL EXAMINATIONS. This section provides room to accentuate the positive as well as any negative findings. When the doctor pronounces you or yours hale and hearty, celebrate it here. And make special note of the findings or advice that result.

INDIVIDUAL PROBLEMS, MEDICATIONS, OR ALLERGIES. Evelyn Morris' medical history includes a notation of the medicine she takes for glaucoma along with instructions for its daily use. (Notation of prescription number and name of pharmacy would be a good idea, too.) Your entry might include the fact that family members take antihistamines for allergies, or insulin or oral medication for diabetes, or are allergic to penicillin. This information can be crucial in an emergency, and can be very important even in a routine consultation since it will help the doctor avoid prescribing a drug that might interact adversely with one that is already being taken.

RECORD OF FAMILY ILLNESS. Acute illnesses, accidents, surgical procedures and infections—whether they require hospitalization or not—should all be recorded in your history. Even common childhood diseases should be recorded, since they sometimes have more serious—though rare—later effects.

I think you'll find that the time and care you take in keeping your family medical record will bear fruit for your family; but its greatest benefit may be for children yet to come. Since 1958, when The National Foundation-March of Dimes turned its attention to birth defects, we have seen great progress in treatment and even more promising developments in the prevention of disorders of prenatal origin. As our understanding of heredity and genetic counseling becomes ever more accurate and accessible, our ability to assure the birth of healthy children into healthy families will increase.

Your family health record, faithfully kept and passed along to your children as they mature, can become a valuable testament to your concern for the well-being of the generations still to be born. *The End*

The National Foundation-March of Dimes seeks to prevent birth defects through its support of:

- A nationwide network of Medical Service Programs in genetic counseling, prenatal care, intensive care of the newborn, and exemplary treatment for children born less than perfect.
- Basic research by outstanding scientific investigators into the causes and means of preventing birth defects.
- A comprehensive program of education for health professionals in the latest advances in birth defects prevention.
- Broad-scale public education to increase awareness of effective preventive measures against birth defects.

JUNITY CHAPTER
...Foundation - March of Dimes
TEL. 72[illegible]434
702 WOODS[illegible]
PORTLAND, OREGON 97[illegible]

THE NATIONAL FOUNDATION-MARCH OF DIMES · BOX 2000, WHITE PLAINS, NEW YORK 10602

Communication Explorations which follow pp. 212 through 232 are designed to increase and build communication skills on various levels (from intra and inter personal levels to technical terminology).

The source for One/Two Way Communication is the N.T.L. Training Lab. Institute.

The map reading activity is probably only appriate for large metropolitan areas.

Medical Terminology is a first attempt at putting together words, phrases and meanings common to the health field.

Hearing and Speech Aides and I (Eye) Care are designed to widen a students scope of awareness.

COMMUNICATION/One Way and Two Way

Teacher Directions:

1. Discuss communication and how it works. Explain the differences in one-way communication and two-way communication. In one-way communication the sender tells the receiver something and this message ends the communication. A lecture, written instructions for a test, and memos are examples of one-way communication. In two-way communicatinn the receiver of a message can ask for clarification, elaboration, and both sender and receiver can benefit fron the increased mutual understanding that results. Discussions and question-and-answer periods are examples of two-way communication.
2. At this point the teacher will be the sender and the class will be receivers. All receivers should be ready with pencil and paper.
3. The sender will use one-way communication instructing the students to draw a figure similiar to figure 2 (included here). The sender should keep track of the amount of time necessary.

Follow-up:

1. Check to see how accurate student drawings are.
2. Evaluate the amount of time used. The differences between one-way and two-way communication.
3. Have students describe how they felt as receivers in the one-way situation.
4. Have students describe how they felt as receivers in the two-way situation.
5. Have students evaluate how they believe the sender felt in both situations.

Variation:

1. Allow students to volunteer to be senders. Use figure 3 and 4 (included here).
2. Allow students to work in teams of two. They can then one way and two way communicate using illustrations in figure 5.

Figure 1

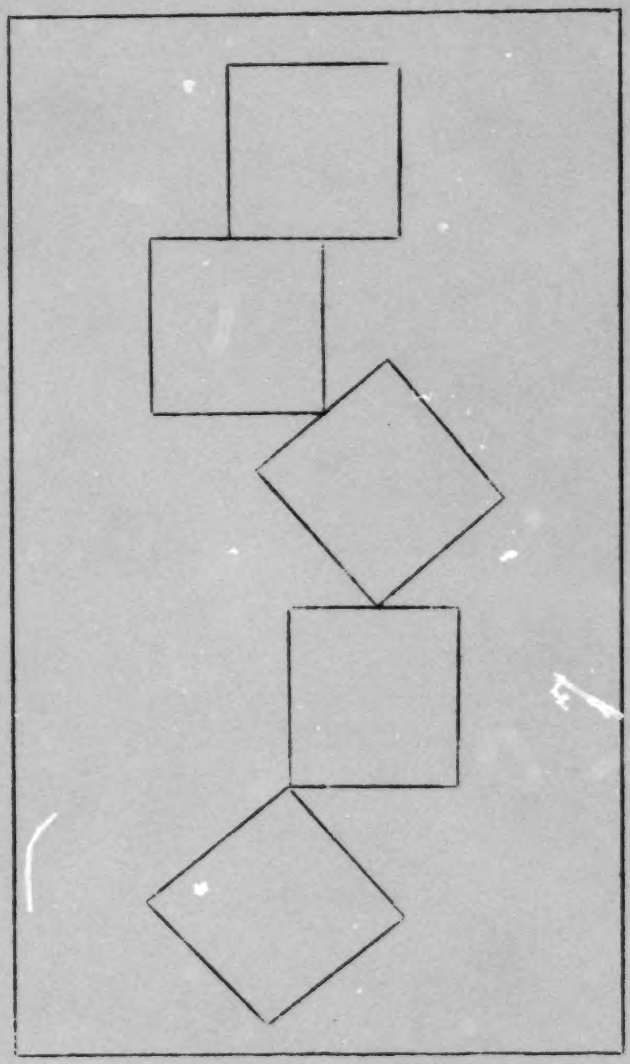


Figure 2

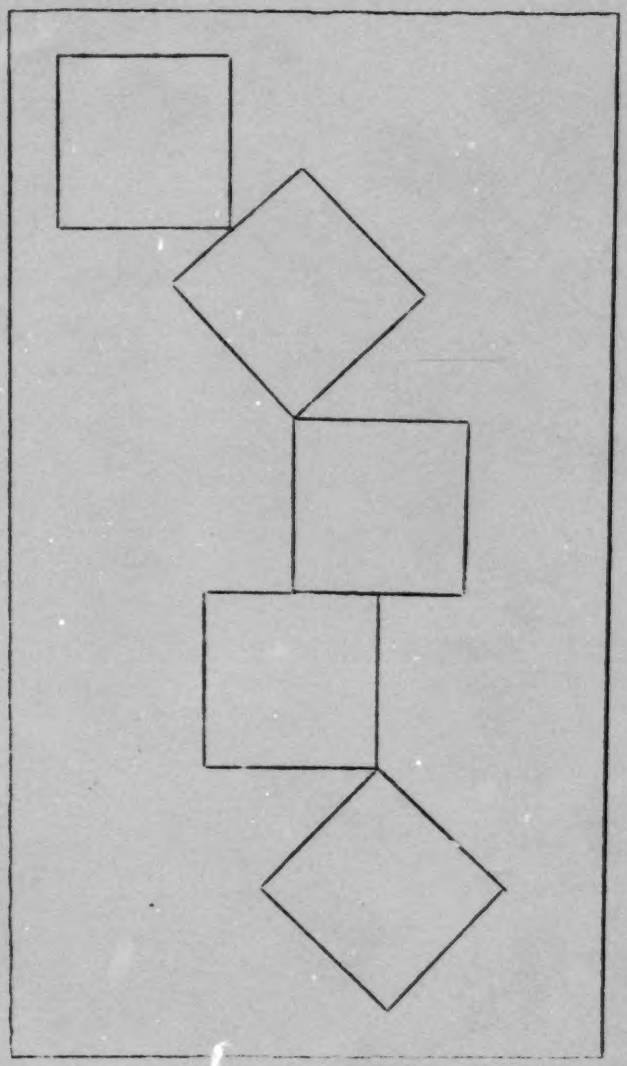


Figure 3

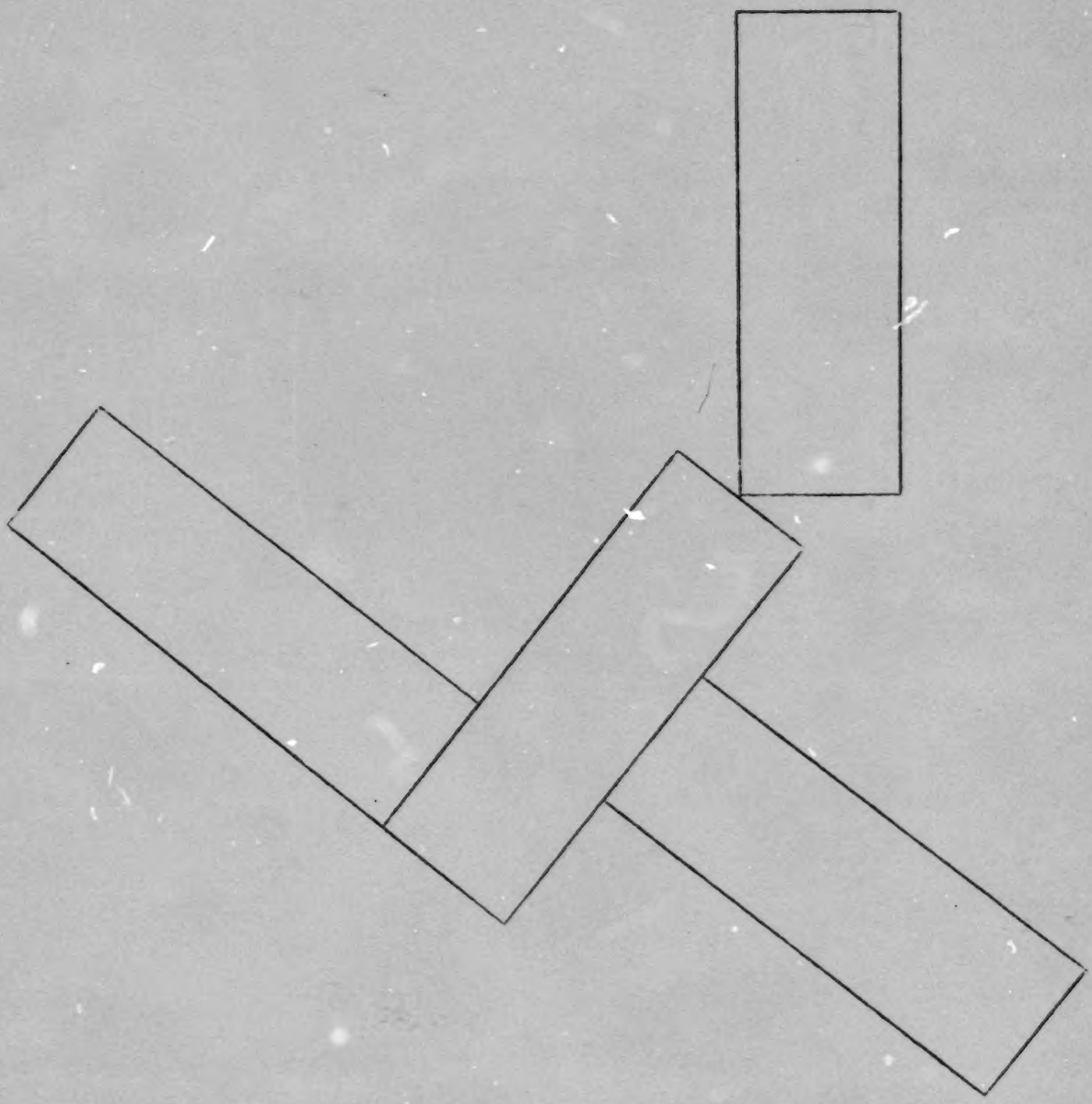


Figure 4

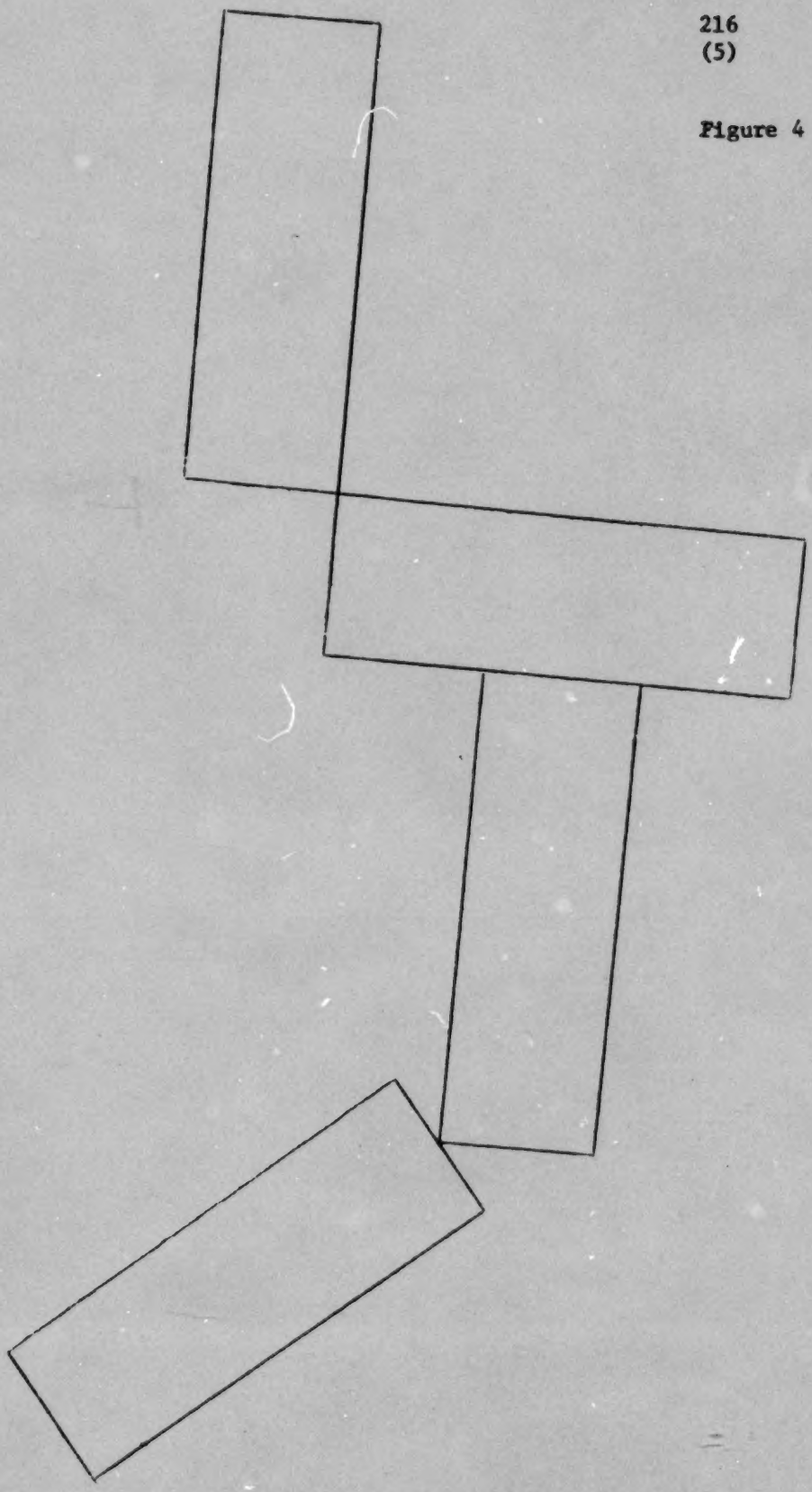
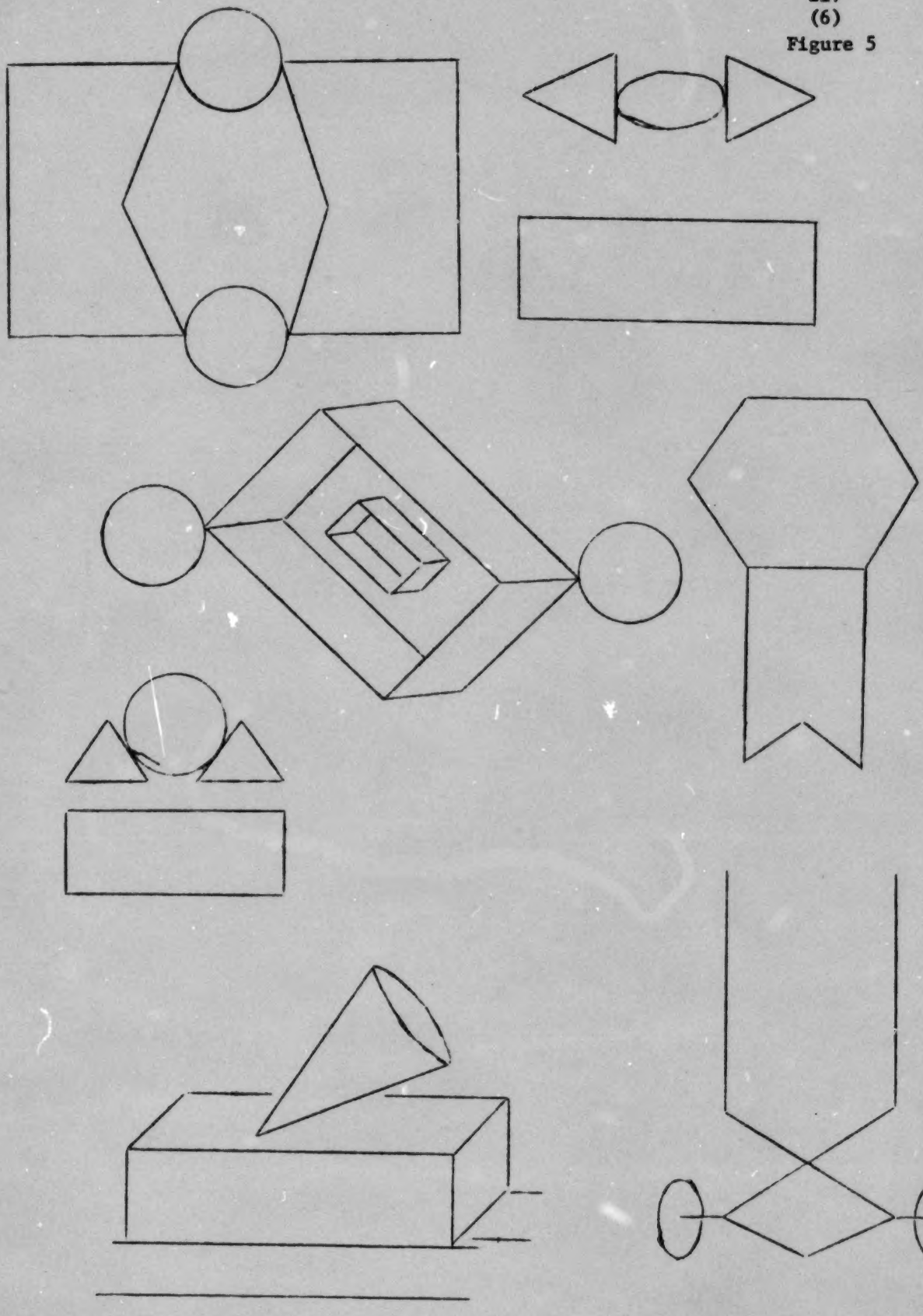


Figure 5



LISTENING AND CLARITY TAPE

General Information: Listening requires practice. It also requires the ability to select major facts or ideas from what you hear. Listening to the evening news is an excellent example. A report from Washington, D.C. may last for five minutes: yet a good listener can summarize with clarity the important facts or ideas in several sentences. How many times have you asked someone else--"What did she say?" You were replying on someone else's listening skills and clarity. Wouldn't it be great not to have to do that? Listening does require practice!!!

Teacher Directions: On a tape record four or five listening exercises. They should range from simple sentences to complex stories. After each section ask students to feed back the facts and ideas with clarity. Listed below are several samples which range from simple to complex in the area of health.

1. Cancer---the name of a group of diseases which have the cp,,pm characteristics of wild and uncontrolled growth of abnormal cells.

2. From Guide To Air and Water Pollution Control, page 79.
"The Federal Water Pollution Control Administration has declared that waters above 93 degrees fahrenheit are essentially uninhabitable for all fishes in the U.S. except certain Southern species. Many U.S. rivers already are a temperature of 90 degrees fahrenheit or more in summer through natural heating alone."

3. From The Controllers;
"At first I was held and completely cared for. I was helpless and could not control myself, so they decided everything for me. When I did something, someone else took the responsibility, because they had control over me. Slowly their control became less complete and less direct. People expected me to do things that I didn't want to do and I was afraid to say, 'I don't want to'. So I developed controllers and I gave the controllers the responsibility."

4. Excert from Jonathan Livingston Seagull: page 125 (paperback)
..."A moment later Jonathan's body wavered in the air, shimmering, ... began to go transparent. "Don't let them spread silly rumors about me, or make me a God. O.K., Fletch? I'm a seagull. I like to fly, maybe..."
"JONATHAN!"

"Poor Fletch. Don;t believe what your eyes are telling you. All they show is limitation. Look with your understanding, find out what you already know, and you'll see the way to fly."

The shimmering stopped. Jonathan Seagull had vanished into empty air.

After a time, Fletcher Gull dragged himself into the sky and faced a brand-new group fo students, eager for their first lesson.

"To begin with," he said heavily, "you've got to understand that a seagull is an unlimted idea of freedom, an image of the Great Gull, and your whole body, from wingtip to wingtip, is nothing more than your thought itself.?...

INTONATION OF VOICE or "Did I really Say That?"

General Information:
Intonation of voice refers to the tone of voice you are using. For instance, you may say something perfectly innocent to your parents, but you get in trouble because they didn't like the tone of your voice. Or you may tell a friend you like them very much, but because the tone of your voice was not serious enough they may think you're kidding or even lying!

Explain use of hi and lo pitch: slow and fast count; nasal vs throat speech.

Other important uses of intonation are during phone calls. Imagine yourself applying for a job over the phone to someone you've never seen before. You say, "Yes, I can do the work" in a normal voice. The employer then says, "I'm not sure you can. You don't sound very confident or enthusiastic." Of course, you think this is totally unfair because you're not even getting a chance. But if you had only used a stronger voice or been a little cheerier, you might have received the chance.

PEOPLE JUDGE OTHER PEOPLE in two ways when they are not close already: 1. by sight; 2. by sound. Once those barriers are passed, then people may get to know the real 'you'. But in our society those barriers must be broken through first. Perhaps this is not always fair to everyone, but you can break these barriers by being in control of how you look and how you sound. Others will begin to understand you better if you are aware of what you are saying and how you are saying it. For example, if what you are saying sounds strong and confident, then people will tend to believe you. If you sound tired and sad, people will think you are.

This is not to say go out and lie because people will believe you. Rather, if you feel sad then express sadness -- if you feel glad, then make sure your words sound glad. Here is an experiment for you and a friend to try: 1. sit back to back or so you cannot see each other's face (use a phone also): 2. describe an object in the room to your partner as simply as possible, then repeat the description, each time try to communicate a different feeling like anger, sadness, happiness, indifference, confidence, uncertainty, etc. 3. have your partner write down the feelings he thought you were communicating and then compare notes after you've finished. You may find yourself asking your partner, "Did I really say that?!"

Examples for a listening tape on intonation:

1. Describe a simple object in a room 4 or 5 ways, trying to express a different feeling each time. Have students list feelings as they recognize them. Give them a general list to work from.

2. Ask a question and have different students respond to it separately and then compare responses in discussion. Question should be along the lines of: "Do you care about_____?" or "Is_____worthwhile?" Try to ask a question that will force a value judgement in their response of one kind or another, therefore showing that the listener deduced an original feeling or emotion from the speaker.

3. Record a "stream of consciousness" conversation in which the speaker has a script and the listener responds solely on his own. Do this with 3 - 5 different listeners, while using same speaker and script. Examine and compare different conversations in class.

BODY LANGUAGE Name_____

Body language is a special class of communication. Most people use it, but few know they do, Animals have used body language for thousands of years and early men who had limited speaking vocabularies probably used it. For example: American Indians used "sign language" and prehistoric men "thumped" women they wanted over the head! Modern body language is used by deaf people (signs), by film actors, and YOU. You use body language to indicate how much you like or dislike people, situations and yourself. For instance, if you like a person you may sit at an engle facing them or you may touch them when talking. And when you are nervous or upset, you may tap your fingers, wring your hands or twiddle your thumbs. All theselittle body actions can and will indicate what you are thinking, but usually other people can see and understand them better than you can.

To help you understand and control your body language, we will try to communicate the following basic words to a partner (or class) without words or looks -- just your body. You may start with 1 or 2 words at a time in your 1st practice. To fully complete the assignment, you must make up a simple sentence from these words to communicate to your (group, partner, class).

Read the words. Select a body action that you think will communicate the idea to others. Write down the action next to the word, so you will remember.

I_____	care_____	sad_____
you_____	love_____	happy_____
we_____	hate_____	friend_____
they_____	like_____	parent_____
work_____	dislike_____	teacher_____
school_____	easy_____	
play_____	hard_____	

*you may add other words if you think you can commmicate them.

Sentence:_____.

Note: You may NOT repeat the same sentence as another student.

WRITER

Teacher Directions: Record on a tape noises which are generally considered irritating. Some examples are: auto body crusher, police car, fire engine, pin ball machine, telephone dial tone and ring, electric mixer, D.D.8 jet taking off, etc. Sounds should be recorded so that they repeat themselves for about thirty seconds.

Procedures: Ask students to close their eyes, listen and concentrate for approximately twenty minutes. After they have listened ask them to complete the response sheet below. This is a good departure point of discussions.

TAPE: Sounds

These questions must be answered after the tape, without consultation of any sort.

1. Do you have a:_____stiff neck, _____ringing ears, _____headache, _____sweaty palms or any other physical changes since the tape began_____

2. Do you feel_____calm, _____tense, _____daydreamy, _____tire, _____like running around or other_____

3. Look at your neighbor. Is he or she_____calm, _____tense, working_____, staring_____ talking_____ or other_____.

4. How would you describe the sounds you just heard? Use one or two sentences.

5. Identify as many sounds on the tape as you can.

NOTE: Using the map that accompanies this sheet, follow the instructions given below. Place each X exactly over the intersections of the streets and proceed with each successive instruction by starting from the last X you wrote, except in the instances where you are instructed otherwise. Number each X as you write it. When you write an X let it stand, make no erasures. There is no time limit but you are competing with the other members of the class. When you have completed the ten instructions, fold your sheet and keep it folded.

1. Place an X at the corner of Johns and 5th Streets.

2. Walk two blocks east, three blocks south, two blocks west, one block north and place an X at the corner where you arrive.

3. Walk one block east, three blocks north, one block east and place an X at the corner where you arrive.

4. Walk five blocks south, two blocks west, three blocks north, one block east and place an X at the corner where you arrive.

5. Walk three blocks west, one block south, five blocks east, and place an X at the corner where you arrive.

6. Walk one block east, three blocks west, three blocks north, and place an X at the corner where you arrive.

7. Place another X as far from the west and south borders of the map as your last X is from the west and north boarders of the map.

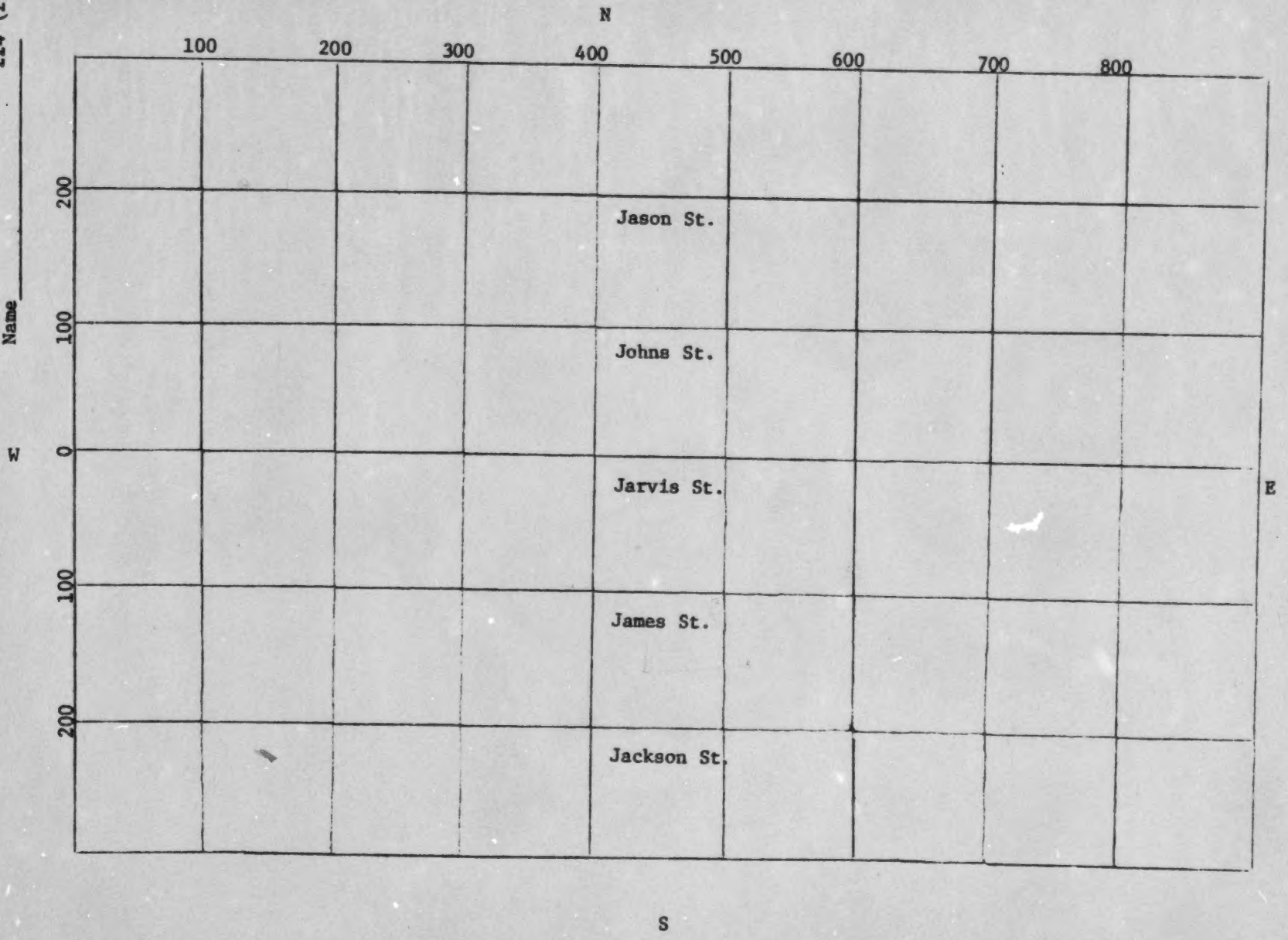
8. Start north, zig-zag north and east, alternating one block at a time and walking five blocks in all, then place an X at the corner where you arrive.

9. Start at the opposite corner of the block southeast of where you placed the last X, walk two blocks west and place an X at the corner where you arrive.

10. Go three-fourths of the way around a square that has the length of two blocks on each side, starting where you placed the last X and ending south of your starting point. Place an X at the corner where you arrive.

224 (2)

Name _____



234

FINDING THE V.D. CLINIC Name_____

Procedure: By using the Portland City map give written directions to a deaf person so that they can reach the downtown V.D. Clinic. The directions would need to be clear, but brief, Write your directions below.

WASHINGTON COUNTY
MULTNOMAH COUNTY
6500
226
Washington Park
2000
1500
1000
500
3500
Willamette River
ROSS ISLAND
HARDTACK ISLAND
3000

MEDICAL TERMINOLOGY Name_____

Medical terms which are commonly used by health care workers are oftentimes difficult to understand. Knowing the meaning of terms which are frequently used will: (1) enable you to communicate more clearly with your doctor and (2) enable you to have greater understanding when you read magazine and newspaper articles concerning health.

Medical terms are usually combinations of words or word parts. Listed below are some more commonly used parts.

Prefixes	Suffixes	Common	Combining
anti (against)	algia (pain)	arthr	(joint)
bio (life)	cide (kill)	cardi	(heart)
contra (against)	ectomy (cut, remove)	crani	(skull)
endo (within)	emia (blood)	derm	(skin)
ex (out from)	gram (writing)	electro	(electric)
hemo (blood)	itis (imflammation)	gastr	(stomach)
hyper (excessive)	logist (person who practices a science)	gyn	(woman)
hypo (under)	logy (study of)	neur	(nerve)
hy[illegible]r (uterus)	oma (swelling)	osteo	(bone)
micro (small)	osis (condition)	oto	(ear)
peri (around)	rhea (discharge)	path	(disease)
post (after)	therapy (treatment)	pod	(foot)
pre (before)		poly	(many)
re (again)		psych	(mind)
		pulmo	(lung)
		thermo	(heat)
		vaso	(vessels)

Define the meaning of the following combined medical terms (use the prefix suffix and common combining lists above for help).

1. arthritis_____
2. biology_____
3. cardialgia_____
4. cardiologist_____
5. cardiovasular_____
6. craniotomy_____
7. dermatology_____
8. endoderm_____
9. gynecology _____

10. hysterectomy_____

11. neuralgia _____

12. neurologist _____

13. osteoarthritis _____

14. otitis_____

15. pathology_____

16. podiatrist_____

17. psychiatry_____

18. psychology_____

19. tonsillectomy_____

20. electrocardiogram_____

With only partial information from the prefix and suffix and common combining lists see if you can define,in your own words, the following medical terms (try to do without a dictionary).

1. anemia_____

2. appendectomy_____

3. biopsy_____

4. bronchitis_____

5. carcinoma_____

6. hemotoxic_____

7. hypertension_____

8. pesticide_____

9. postmortem_____

10. prenatal_____

HEARING AND SPEECH AIDES

Did you know the chances are very great that you will lose your hearing? Frightening? Not really, for we all will get old and slow down, and as we do so, our hearing powers will begin to fade.

If and when this happens, one, two or three professionals may be involved in the diagnosis. These people are the Otologist, the Otolaryngologist, and the Audiologist.

The Otologist is a medical doctor who specializes in diagnosis and treatment of the ear alone. The Otolaryngologist is a medical doctor who specializes in the diagnoses and treatment of the nose and throat as well as the ear. The Audiologist is a specialist in the non-medical evaluation and rehabilitation of persons with hearing disorders. All three may give hearing tests using an audiometer to determine the extent of hearing loss and may recommend the use of a hearing aid.

*Many times, any one or all of these professionals work with another. The speech thereopist is one who helps persons correct speech defects which may or may not be connected with hearing problems.

1. Of the three professionals described above, who may perform surgery on the ear?
2. Who of the three may have the most training?
3. What is the difference between an Otologist and an Otolaryngologist?
4. Define Otology.
5. What is an Audiometer?

I (EYE) CARE

Name_____

Need glasses? Know where to go for them? You really have two choices, depending upon what you think the problem might be or upon how you feel about medical doctors. In the end the person who will test your vision will be either an ophthalmologist or an optometrist.

An ophthalmologist is a medical doctor who specializes in the treatment of eye diseases and visual disorders. He or she is the person who may perform surgery on the eye itself.

Sometimes ophthalmologists are so busy treating diseases and disorders of the eye they do not have time to give vision tests. In this case, you may choose to see an optometrist---- specialist who measures the power and range of your vision.

In either case, your glasses are made by the optician who grinds the lens according to your prescription and fits them to the frame you choose.

Define the following:

1. Ophthalmology
2. Ophthalmologist
3. Optometry
4. Optometrist
5. Optician

6. (a) Who do you think has the most education of the three professionals described about?
   (b) Who the least education?

7. Who would perform surgery on the eye?

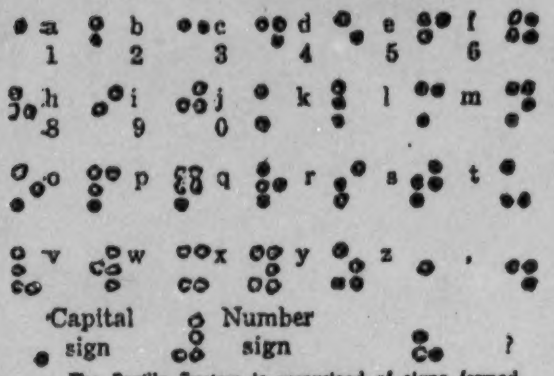
Both independent projects which follow Impaired Vision/Braille and Impaired Hearing/Finger Spelling are for a small number of students. These activities are for those students who choose to further their exploration experiences. The braille activity necessitates the use of a braille writer, which can be loaned from any support service in the field.

IMPAIRED VISION

BRAILLE/Instructions and Information

BRAILLE ALPHABET AND NUMBERS USED BY THE BLIND

Close your eyes and read this with your fingers.



The Braille System is comprised of signs formed by the use of all the possible combinations of 6 dots numbered and arranged thus: 1 4 / 2 5 / 3 6

Letters are capitalized by prefixing dot 6. The first ten letters preceded by the number sign represent numbers. Punctuation marks are formed in the lower part of the cell.

In addition to ordinary print the Braille System provides for the writing of foreign languages, musical scores, mathematical and chemical notations, and other technical matter.

The first schools for the blind were established in the United States in the early 1830's. Then, as now, one of the greatest needs was for an ample supply of books and special apparatus for instructional purposes. The relatively small number of the blind, and the specialized nature of publishing books for their use, makes production costs so high that the printing of these materials cannot be undertaken as a commercial enterprise.

To meet this need, the American Printing House for the Blind was founded in 1858 as the central, national printing house for the blind. Today, it is the oldest national agency for the blind in the United States and the largest publishing house for the blind in the world. In the beginning, all materials were published in embossed print. Today, not only does the Printing House supply Braille books and magazines of all types, but Talking Books (on phonograph records) for the four out of five blind people who cannot learn to read Braille, as well as large type books for partially-visioned children, and special items of tangible apparatus such as slates, Braille-writers, dissected relief maps, relief globes, arithmetic slates, and the like.

As the official schoolbook printery, the Printing House provides each year, through the Federal Act "To Promote the Education of the Blind," approximately $410,000 worth of educational materials for the over 13,000 blind children being educated in the schools and classes for the blind throughout the states and territories. For the over 60,000 adult blind readers, there are produced nearly 500,000 Talking Book recordings of full-length books and magazines, as well as 10,000 volumes in Braille. Seventy-odd separate periodicals, including exact recorded and Braille reprints of "The Reader's Digest," are published on regular schedule, some of them weekly. In all, over $1,500,000 worth of literature and materials are supplied at cost each year for the benefit of the blind.

LARGE PRINT

Children with some residual vision are sometimes able to do a part of their work with their eyes. This is a sample of the 18 point type which is available on all grade levels for this purpose. The large print textbooks parallel the Braille texts in each instance.

For further information, write to:

AMERICAN PRINTING HOUSE
FOR THE BLIND
1839 Frankfort Avenue
Louisville 6, Kentucky

IMPAIRED HEARING
Finger Spelling

Name_____

Finger spelling is one of many methods which deaf people use in order to communicate. The card you are being given to use is the simple finger spelling alpabet. It is used for beginning finger spellers.

Find a partner who is also trying to finger spell--you will need to work together on the first part of this project. Each one of you independently write three sentences.

1.

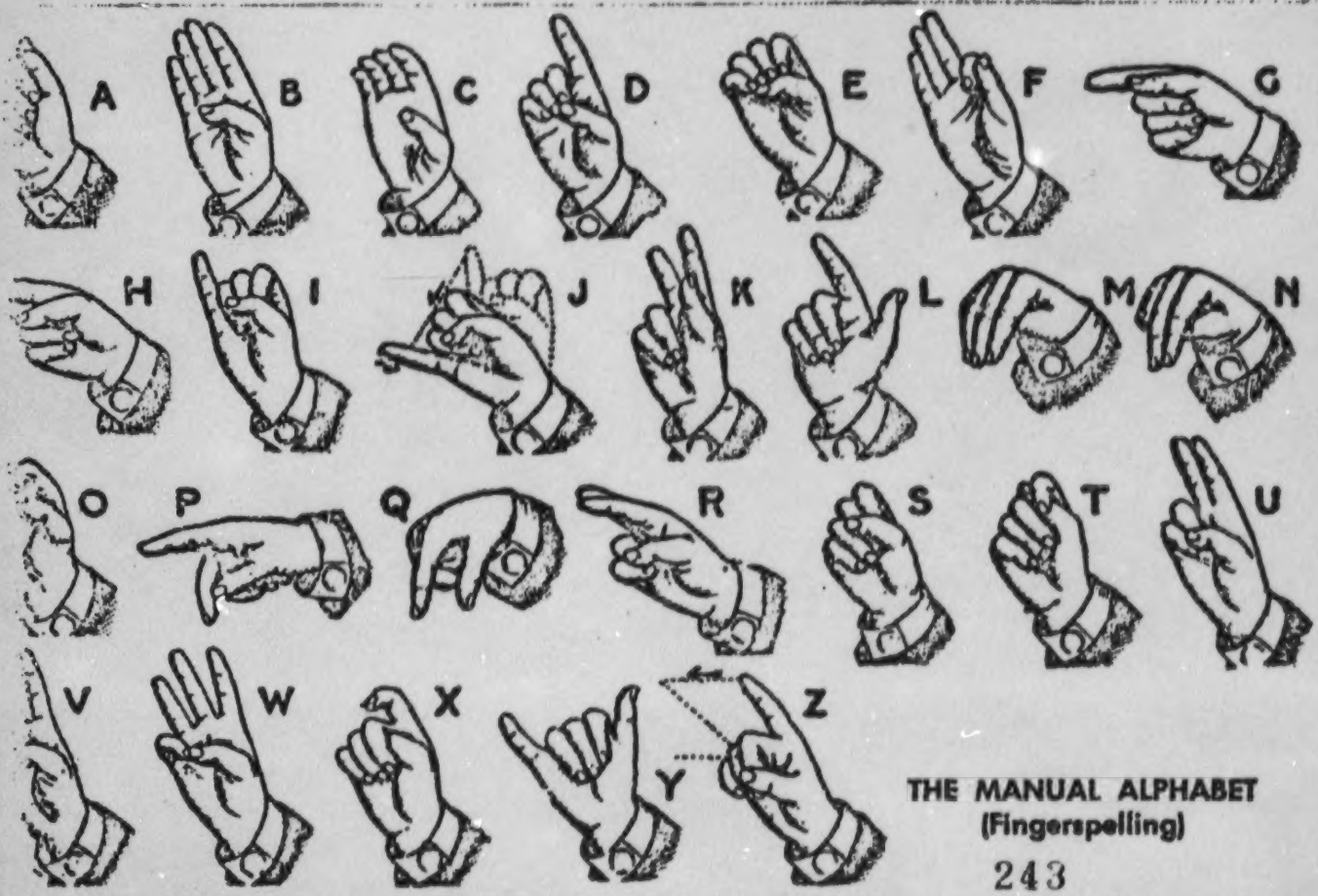
2.

3.

Try to finger spell your sentences to your partner. Can he or she tell what you are trying to communicate? How accurate were you? three out of three___, two out of three___, one out of three___.

Complicated finger spelling can be seen on t.v.--sometimes in the form of lessons or as a news broadcast. Watch one of the following and then explain your impression of it.

Channel 8 "Talking Hands" 6:15 a.m. Monday, Wednesday or Friday (instruction)
Channel 12 News Saturday 7:15 a.m. Sunday - 6:45 a.m. - 10:00 p.m.



THE MANUAL ALPHABET
(Fingerspelling)

Evaluating and Exploring Careers provides students opportunities to evaluate health career information and to look more closely at a variety of health careers.

Who Would You Choose is aimed at developing skills in identifying types and levels of health practioners.

Dr. W ?Who and What is an activity designed to evaluate the typical mail order 'doctor.'

The career interest packets included are self-explainatory. They have been developed with material from Career World and Labowitz's Health Career Series.

WHO WOULD YOU CHOOSE?????- Doctors

The term 'doctor' was once used to mean a learned person, a teacher. Today the term 'doctor' is applied to many fields -- most of which require a specific course of study. Listed below are a variety of doctors. In the left column identify a dental surgeon, a veterinarian, a medical doctor, a dentist and a medical officer. In the right column identify as many "doctors" as you can. A dictionary may be helpful.

_____ 1. M.D. _____

_____ 2. D.C. _____

_____ 3. N.D. _____

_____ 4. D.O. _____

_____ 5. M.O. _____

_____ 6. D.M.D. _____

_____ 7. L.H.D. _____

_____ 8. L.H.D. _____

_____ 9. D.D.S. _____

_____ 10. D.V.M. _____

_____ 11. D.H.S. _____

_____ 12. Ph.D. _____

_____ 13. D.Sc. _____

_____ 14. Ed.D. _____

_____ 15. L.H.D. _____

DR. W_____ Who and What

Teacher directions: This is an ideal activity to introduce quackery and consumer protection in the area of health. Have students read Dr. W_____ (included here). Then have them evaluate and answer questions such as the ones listed below.

1. What five medical skills does Dr. W_____say he can provide?

2. Are Dr. W_____'s prices reasonable? (Explain)

3. If you were in need of medical attention in a field suggested here would you utilize Dr. W_____? Explain and justify your decision.

Registered U.S. Pat. Off.
Office of the President

DR.

237
(1)

"Better Product. for better Living"

Dr. [redacted]
Laboratories Inc.

P.O. Box
, Florida

Dear Friend: I am a medical doctor with my practice devoted for more than 36 years EXCLUSIVELY to the hair and scalp. You can benefit from my wide experience with more than 3,000,000 treatments given in my 36 years of MEDICAL PRACTICE - not Beauty Parlor or Barber Shop manipulations, but specific medical treatments in Cosmetic Therapy as a Licensee of The Ohio State Medical Board. To my knowledge I am the only medical practitioner whose practice has been confined exclusively to hair & scalp problems for 36 years.

Thru my experience in this specialized field I have discovered excellent preparations which have wide-spread acceptance. Fictitious promises of hair regrowth with the usual showing of before and after pictures of rare Alopecia Areata cases, give veiled promises that hair can be regrown for all comers. You may be one of the many millions who have been fooled, and if so, you probably believe that no good can come from any source now. It is certain that if you are shiny bald with only a fringe of hair around the edges that nothing can be done for you to grow new hair. But you must still keep your scalp clean and protected so that you can make your best possible appearance. PROTECT WHAT YOU HAVE.

There are no miracles for dead-function materials, but I can offer you thru my Laboratories Company, valuable preparations to keep your hair and scalp in the best possible condition--preparations which have met the critical test of time which will help you keep and maintain the best possible coverage and the LEAST LOSS OF HAIR over the years, to help you look younger, longer.

My proprietary preparations are "TOPS". You can choose what you need to maintain a comfortable, itchless scalp, stimulate a faster rate of hair replacement with ease and comfort. Also, I can give you the basic rules to follow and the formulas to use to keep a healthy head of hair functioning as it should. ACT NOW!

"TAKE CARE, HAVE HAIR" Most sincerely yours,

D.S.L.

CES/ml

DR. [redacted] D.M., D.C.T. [redacted] L

DR. ... OUTSTANDING
PROPRIETARY PRODUCTS
"Incontestable Trade Marks"
distributed by

R. SHIFFER LABORATORIES, INC.

SHAMPOO AND ANTISEPTIC

Shampoo: THE PERFECT SHAMPOO. A ..., concentrated saponification formula that lasts ... and does more for your hair and scalp than any ... shampoo you can buy regardless of price.
... 6 oz. bottle (POSTPAID) $3.50

Shiffer's Hair & Scalp Antiseptic. For prophylactic ...ection for the hair and scalp. Efficient and long-...g. Use after shampooing.
... 6 oz. bottle (POSTPAID) $3.50

R. FAMOUS DANDRUFF SERIES
(11-24-60-65-107)

Special Formula #11: Massaged into the ..., it stimulates tissue exchange, reduces scalp scruff, ...ases blood flow to the hair roots, aids hair growth ...replacement.
... 6 oz. bottle (POSTPAID) $6.00

Shiffer's Formula #65 for DRY HAIR. A unique, ...rbing, oil preparation for Dry, scaly, dandruff and ...my scalp accumulations. Clears plugged hair follicles ...pores.
...g-Lasting 2 oz. bottle (POSTPAID) . . . $5.00

Shiffer's Formula #60 for OILY HAIR & SCALP. A ...plementary preparation to follow Formula #11 to ...alize the oily condition.
... Bottle (POSTPAID) $6.00

... Formula #24 for THINNING HAIR. A vital ...ration to follow Formula #11 in cases of thinning ...with or without dandruff.
... Bottle (POSTPAID) $6.00

Psoriasis Control Formula #107. A stainless, ...less, smooth, ointment formula. Looks like cold ...m. Spreads quickly, evenly. Is easy to apply. Does ...SMART, BURN or DISCOLOR your skin or clothes.
... Jr. (POSTPAID) $6.00

"FEELS SO-o-o-o GOOD"

OTASAGE 5 SPOT SCALP MASSAGER
(U.S. Pat No. 2,516,491)

"Better Products For Better Living"

DIETARY SUPPLEMENTS

Dr. ... Heart Care BSM Liquid. A fortified black strap molasses base with Thiamin Hydrochloride, (B1) vitamin. A natural food to aid the heart muscle, containing natural minerals, especially Potassium and Iron. Tasty.

Large 6 oz. bottle (POSTPAID) $4.00

U.S. Patent No. 2,516,491.

ROTASAGE 5-SPOT SCALP MASSAGER

(Hand operated.) 50 flexible rubber fingers to help increase circulation. FEELS GOOD, EXHILARATING, AIDS IN SHAMPOOING.

Price $5.00

DYNA-VITS: a fine dietary supplement. ONE LITTLE TABLET A DAY supplies the vitamins and minerals you need. So easy to take. No odor or after taste. Supplies the minimum daily requirements of Vitamins A, D, B1, and C, Niacinamide, Iodine and Iron. The requirements of B6, Copper and Potassium have not as yet been established; and the need for Calcium Pantothenate in human nutrition has not been established. These are small in size...easy to swallow...and "power-packed."

DYNA-VITS–100 in bottle. $4.00

ATHLETE'S FOOT REMEDY

Dr. ... Athlete's Foot Remedy. The finest fungicide available for the treatment of this very annoying and resistant fungus involvement. Cooling, non-staining, extremely pleasant to use. Effective. No other formula more efficient.

4 oz. bottle, long-lasting (POSTPAID) . . . $4.00

DR. ... PROFESSIONAL
HAIR BRUSH

AN EASY BRUSH TO USE.
Well balanced and light weight.
High Grade Pig Bristles.

Price $5.00

VIOLET RAY (HIGH FREQUENCY)

Electric - AC Current - 115 Volt
STIMULATING - PENETRATING
Well-boxed with flat surface scalp electrode. Valuable circulation stimulator.

Price $40.00

MODEL V-41 VIBRATOR

AC Current, 115 Volt.
Highly stimulating for Scalp and Face.

Price $20.00

REMEMBER

Dr. ... Formulas are the best. There is nothing better for your hair and scalp if you want increased growth, better replacement, protection and proper stimulation. These formulas are time-tested and tried preparations of merit used professionally over the years.

They are:

Easy and simple to use
Effective and stimulative
Odorless -
Non-staining
Never messy or sticky
Directions clear and simple

To my knowledge Dr. ... formulas are the ONLY Preparations available that have been used exclusively in medical hair and scalp practice by Dr. ... for more than 36 years.

CERTAINLY YOUR HAIR AND SCALP DESERVE THE BEST.....THE VERY BEST

248

Office of the President

DR. ... *Registe... U.S. Pat.*

"Better Products for Better Living"

DR ... LABORATORIES, INC.
P.O. Box ...
...da, Florida

Dear Friend:

Hair is a PRECIOUS ASSET. Give it the care and a... tion it deserves so that you may look your best. Don't satisfied with just any shampoo and the usual hair and ... preparations. Hair is TOO IMPORTANT to you and your ...sonal appearance. Do as thousands and thousands of Dr. ...fer's patients have been doing over the years. . . . USE SHIFFER'S SHAMPOO and DR. SHIFFER'S HAIR & SC... ANTISEPTIC for perfect cleansing as well as the BEST ...tection. Everyone should use BOTH of these items . . . cost is LESS over the years and the SAVINGS, REAL!

IF YOU HAVE DRY HAIR AND SCALP

Use ... famous Shampoo. Then rinse ... oughly. Apply ... Dr. ... Hair & Scalp Antise... Dry your hair with a soft towel. Then apply FORMULA ... Massage in for a few minutes. Then apply FORMULA#6... needed. This is so simple and so effective.

IF YOU HAVE OILY HAIR AND SCALP

Shampoo, using Dr. ... famous Shampoo, follo... by Dr. ... Hair & Scalp Antiseptic (as above). ... apply FORMU... A #11. Massage this in. Then apply F... MULA#60. This too, is simple and effective. You'll m... al results.

IF YOU HAVE THINNING HAIR
(Whether hair or scalp is D...Y or OILY)

Shampoo, using Dr. ... hampoo and the Ha... Scalp Antiseptic (as above). Then apply FORMULA#1... lowed by FORMULA#24. No better combination exists ... the control of THINNING HAIR whether OILY or D...

IF YOU HAVE PSORIASIS

There are many preparations on the market for P... RIASIS. Most of them are unsatisfactory. Dr. ... RIASIS CONTROL FORMULA#107 is your best bet. ... STAIN, IRRITATION or ODOR. A wonderful creamy ... ment for best control.

OTHER PREPARATIONS AND APPLIANCES

Other items are listed here. They, too, are "tops" ... quality and "Designed for Better Living." I hope we have ... opportunity to serve you.

Very sincerely yours,
DR. ... LABORATORIES, INC.

Dr. ...

CES/ml

Dr. Shiffer is a Licensee ... Ohio State Medical Bo...

WHAT ARE HEALTH CAREERS ALL ABOUT? Name_____

How would you define the word job?

How would you define the word career?

What do you think are the differences between the words job and career?

Would you prefer a job or a career? Why?

There are three stages to career education. What are those stages?

1.

2.

3.

There are many kinds of health careers. Some careers in health are common to other career groups. For example, there are administrators and teachers in schools.

Where might an administrator in the health field work?

1.

2.

3.

Where might a teacher in the health field work?

1.

2.

3.

Every job requires people to function in relation to data, people and/or things--in varying degrees. Have you ever heard people say, "Do you want to work with people or with things?" -- this is really what they are talking about.

What do you think the following mean?

Data:

People:

Things:

Do you think an Ambulance Driver is more related to data? people? or things? Explain your answer.

Do you think a Physical Therapist is more related to data? people? or things? Explain your answer.

Do you think a Pharmacist is more related to data? people? or things? Explain your answer.

Some terms such as therapy are common to the field of health. What does the word therapy mean? (Use the dictionary).

Some types of therapy are more difficult to define. You will need to know what the first word of their career means.

What do you think inhalation therapy would be?

What do you think occupational therapy would be?

Another term common to the field of health is nurse. What does the word nurse mean, in relation to health care? (Use the dictionary).

What is a registered nurse?

What is an LPN nurse?

What is a nurse aide?

A medical doctor who works in one particular field is called a specialist. The more a physician concentrates his attention on a given system of the body, the less time he has for the whole person and the less proficient he is in general practice. To thoroughly know one area of medicine, he must confine himself to it to the exclusion of either areas. Such concentration has been necessary for medicine to make its great strides in heart surgery, cancer treatment and prevention psychiatry, orthopedics, surgery and other areas.

A recognized specialist must have completed a full program of medical training and passed the written examination required of his particular specialty.

Some common specialists are:

Pediatrics -- doctors who specialize in the care of infants and children. They advise parents, give check-ups, diagnose congenital deformities, administer immunizations, and treat childhood diseases.

Surgery -- The work of the surgeon involves surgically operating on a patient to correct some physical condition. It may involve removing a cancer, repairing a defective heart, setting a broken bone, or attempting to correct a damaged brain.

Obstetrics - doctors who specialize in obstetrics care for women in pregnancy and child birth. Frequently this speciality is combined with gynecology (the care of women's diseases).

What would the following specialists do:

A urologist specializing in urology.

A radiologist, specializing in radiology.

A proctologist specializing in proctology.

It has been said that behind every specialist there are at least ten to fifteen various health care workers. List below the health care workers who might be of assistance to the fields of specialized medicine.

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

EXPLORING A HEALTH CAREER

Select one health or health related career. It should be one which particularly interests you and one in which you would like to obtain more information.

Using any material which is available to you, develop an informational chart, pamphlet or flier which would, in brief form, intice someone to look further into the career. You may use illustrations, diagrams, slogans, etc. You should include the following information:

1. Name of the career
2. Brief job description
3. Type or amount of training necessary
4. Salary
5. Employment opportunities (open equally to both sexes?)
6. Personal Qualifications
7. Any special information (i.e. working conditions, hours,etc.)
8. Advancement opportunities
9. Where to find further information

See your teacher for butcher paper, scissors, glue or any further materials you might need.

ECOLOGY/POLLUTION CAREER INTEREST PACKET

In the past ten years, our environment has become much more important in our lives. We pay more attention to how it is being developed and taken care of than we used to. Since we have found that pollution, population and disease are growing faster than we can control them and our resources are being depleted at high rates; we have found it necessary to develop new controls. Consequently, new fields of employment have opened up for those people who care about and are interested enough to save and help clean up our environment.

These are four basic fields of employment for environmental people:

1. pollution prevention and control
2. disease prevention
3. environmental planning
4. resource control

In each field there are many types of employment. There are jobs for engineers, scientists, technicians and aides, to name a few. Most of these positions require a certain amount of education, either in college or on the job training (if you already have a basic education in the sciences particularly). It must be remembered that if you truly want to help the environment by tackling one of the types of environmental jobs, you MUST have the education to back yourself. For every position you apply for there are others who want the same position, so the employer must consider who is the most qualified for the job. Qualifications usually consist of the following attributes:

1. must have thorough education in field appled for;
2. should be able to move from one position to another easily;
3. should be able to work in 2 or more fields; and
4. should be easily retrainable for newer jobs that open.

Now, when you ask yourself, "Am I qualified?"; you should also ask, "Do I care enough to work hard at the job?" If you do, then your next step is to finish this brochure and choose 2 or 3 areas in which you are interested. Look up the qualifications demanded by the job and begin pointing yourself in the direction of meeting those qualifications. This and some self-determination will give you a headstart on the people you will compete with one day in the environmental career field.

A quick look at disease prevention jobs

Research suggests that some foods may be harmful to consumers because of too large amounts of additives, adulterants, preservatives, and pesticides. Nutritional shortages and diseases allegedly caused or contributed to by these ingredients have created a growing demand for workers to monitor and control food products.

Other prevention workers check institutional wastes and working environments to be sure they do not become sources of diseases.

Pest control is also part of this job group. Pests include flies, mosquitoes, rats, bats, and other potentially disease-carrying insects and rodents. Care is taken to preserve the ecological balance of the community and to limit the use of pesticides.

These and other disease prevention activities are the concern of workers in this job area.

entomologist (1)	Studies insects and their relation to plant and animal life. Aids in control and elimination of harmful pests such as Japanese beetles, fruit flies, gypsy and brown-tail moths, and forest insects. Develops new and improved insecticides and biological control methods.
environmentalist (also called sanitarian) (2)	Plans, develops, and carries out environmental health programs. Determines and sets health and sanitary standards. Enforces regulations concerned with food processing and serving, collection and disposal of solid wastes, sewage treatment, plumbing, recreational areas, hospitals and other institutions, noise, ventilation, air pollution, radiation, and other environmental concerns.
exterminator (4)	Sprays chemical solutions or gases and sets traps to kill pests in buildings and surrounding areas.
food and drug inspector (2)	Inspects buildings and conditions where food, drugs, and cosmetics are manufactured, handled, stored, or sold. Enforces legal standards of sanitation, purity, and grading. Collects samples of products for lab analysis.
industrial hygienist (2)	Conducts health programs to stop or control job health hazards and diseases affecting workers on the job. Analyzes samples of dust, gases, vapors, and other possibly toxic materials for analysis. Performs sound level tests to find relationship of noise to employee comfort and efficiency.
microbiologist (food) (1,2)	Investigates action of micro-organisms in manufacture, spoilage, and deterioration of food other than milk products. Finds source of contamination.
milk sampler (4)	Collects milk samples and ships for lab analysis.
plant pathologist (1)	Conducts research into nature, cause, and control of plant disease and decay of plant products. Finds disease-causing organisms. Tests disease control methods. Studies effects of soils, climate, and geography on outbreaks of plant disease.
plant quarantine inspector (3,4)	Enforces quarantine laws to prevent spread of plant diseases. Examines shipments from foreign countries to keep diseased plants from entering.
public health bacteriologist (1)	Does experiments to find harmful or disease-causing bacteria in water, food supply, or general community. Suggests controls or ways to eliminate sources of these bacteria.

(1) usually requires post-graduate studies
(2) usually requires a 4-year bachelor's degree
(3) usually requires a 2-year associate degree
(4) usually requires some on-job or other training after high school

245
(3)

A quick look at environmental planning jobs

As the world's population grows, proper land use is a vital concern. Workers in this job group need to consider the present environment as well as future needs and uses in making decisions about land use. Scenic parks and desirable landscapes must be provided for recreational use and enjoyment. Urban planning requires provisions for building and for moving traffic and pedestrians with the least congestion. These and many other challenges face today's environmental planners.

civil engineer (2)	Plans, designs, and oversees building of bridges, buildings, and other structures.
geographer (2,1)	Studies the earth's surface (topography, climate, etc.).
landscape architect (2)	Plans and designs land use for such projects as parks, highways, schools, and commercial, industrial, and residential sites.
land use technician (3)	Investigates violations in land use and zoning regulations.
sanitary engineer (2)	Designs and oversees construction and operation of such projects as water works; sewage, garbage, and trash disposal plants; drainage systems, and insect and rodent control projects. Oversees swamp drainage and insect spraying. Directs workers in sewage disposal plants. Inspects and regulates sanitary conditions of public places, such as markets, parks, and camps.
statistician, biological and agricultural science (2)	Conducts surveys and experiments. Gets statistics for use in scientific research of plants, animals, and humans.
urban planner (1)	Develops programs for land use, and buildings and other structures, in cities, counties, and metropolitan areas.
weed control supervisor (3)	Directs state supported programs to control weeds in assigned area. Advises land owners on control techniques.

(1) usually requires post-graduate studies
(2) usually requires a 4-year bachelor's degree
(3) usually requires a 2-year associate degree
(4) usually requires some on-job or other training after high school

246
(4)

246
(4)

A quick look at resource control jobs

The jobs in this group are concerned with conserving our natural resources for beauty, recreation, and tourism, as well as maintaining ecological balance. Most of the jobs involve regulating land use, maintaining the environment, enforcing laws governing the use of resources, or providing suitable recreational areas.

animal ecologist (2,1)	Studies distribution, physical characteristics, behavior, and life history of animals. Studies environmental factors such as plant growth, rainfall, temperature, altitude, and sunlight in relation to animal life.
fishery biologist (1)	Studies aquatic organisms. Manages fisheries or fishing resources, or performs research. Advises hatcheries on the best conditions for fish growth.
forester (2)	Manages and develops forest lands and their resources for economic and recreational purposes. Plans campsites and recreational centers. Assists in control of floods, soil erosion, tree diseases, and insect pests.
forester aide (4)	Works to inventory, protect, and re-forest timber lands. Observes, measures, and records forest data such as temperature, waterflow, and burned and cut areas. Helps enforce recreational regulations such as parking, sanitation, campfires, etc.
forest fire fighter (4,3)	Stops forest fires by felling trees, digging trenches, using ax, etc. Patrols burned area after fire to watch for hot spots that may restart the fire.
game management agent (2)	Enforces regulations for the protection and conservation of wildlife. Acts as middleman between state and federal agencies. Meets with and advises these agencies about local conditions.
mining engineer (2)	Determines location and plans mining of ore, minerals, etc. Plans locations and development of shafts, tunnels, etc. Plans and coordinates use of manpower and equipment for best efficiency, safety, and environmental conditions.
park ranger (2)	Enforces laws, regulations, and policies in state and national parks. Enforces standards of cleanliness and sanitation; patrols to prevent fires, vandalism, and theft.
soil conservationist (2,1)	Plans programs for soil erosion control, moisture conservation, and sound land use.
wildlife biologist (1)	Works in the conservation and management of wildlife. Does research to find and apply biological facts, principles, methods, techniques, and procedures necessary for the conservation and management of wildlife.

(1) usually requires post-graduate studies
(2) usually requires a 4-year bachelor's degree
(3) usually requires a 2-year associate degree
(4) usually requires some on-job or other training after high school

247 (S)

A pack of pros

As you can see, the environmental field offers an astonishingly broad range of career choices. Many of the jobs in the lists are professional-level jobs. The scientists (chemist, entomologist, microbiologist, etc.) and engineers (civil, sanitary, mining, etc.), for example, are professional-level jobs. They require 4 years of college and increasingly, post-graduate work as well.

Unlike medicine, law, or most other professions, environmental careers involve a variety of disciplines. Some schools offering the kind of curriculum you want may not even have the word "environment" in their list of courses!

A recent survey to which over 100 U.S. universities responded shows the following 13 major fields of study for future environmentalists:

1. aeronautics and space sciences
2. agricultural sciences, agronomy, forestry
3. architecture, urban planning
4. chemistry
5. ecology
6. economics
7. engineering sciences
8. geosciences
9. marine sciences, oceanography
10. math, computer science
11. medicine, public health
12. physical and biological sciences
13. social sciences

These fields of study can lead to jobs in a number of occupational groups, in addition to environmental careers.

Probably the best college route is to start with introductory survey courses which offer the basics of several environmental disciplines. The broad background can help you decide which discipline(s) will be your specialty, as well as allow greater future career flexibility.

Sampling salaries

Environmental professions are so varied, salary information about the field as a whole has little meaning. To give you an idea of the salaries for some specific jobs, here's a representative list. (All salaries are for those with at least a bachelor's degree).

forester: Up to $9,053 per year to start; with a master's degree and several year's experience, $11,046-13,309. With a Ph.D. may advance to $15,866-25,538 and up.

industrial hygienist: Start at about $8,000; with experience, about $12,000-18,000; a few earn $30,000 and up.

landscape architect: About $9,520 to start; most advance to over $12,000; a few earn $26,000 and up.

mining engineer: Start at about $9,600; most advance to $12,000-15,000; a few earn $30,000 and up.

environmentalist: With experience, salaries range $10,000-14,000.

soil conservationist: Up to $9,053 to start; with a master's degree and experience, $11,046-13,309. With a Ph.D. may advance to $15,866-25,538.

urban planner: About $8,200 to start; with 2 years experience, about $11,250; directors typically earn $12,300-30,000 and up.

wildlife manager: Start at about $6,000-7,000; those in administrative positions earn $10,000-15,000 a year.

Help for the pros

For every professional in the environmental field, there are a host of technicians and aides who help professional workers carry out environmental programs.

These paraprofessionals fall into 2 main groups, though some duties may overlap. In the first group are the environmental technicians who usually have at least 1-3 years of college or other advanced training. Many have 2-year associate degrees. Duties include sampling, inspecting, operating technical equipment, surveying, testing for bacteria or chemicals, and recording data. Technicians' jobs frequently are rewarding and interesting. Many technicians find so many job satisfactions that they have no ambition to trade places with the professionals who supervise them—and have more headaches.

This list of typical technicians' duties is based on an Alabama Department of Public Health job description for the *sanitation technician:*

1. maintaining technical equipment
2. preparing educational materials
3. supervising the use of various water testing devices
4. collecting water and waste samples
5. doing routine lab tests
6. identifying disease carriers (insects, rodents, and others)
7. inspecting for conditions that host disease carriers
8. recommending control measures as part of community sanitation programs

Environmental technicians in private industry and at state and local levels earn good salaries. Federal salaries range between $8,000-10,000 a year to start; $12,000-14,000 with some experience; and $16,000-23,000 for experienced technicians with supervisory duties.

A good 2-year college education with emphasis on the sciences will qualify you for many technology jobs in the environmental field. Check community and junior colleges, technical institutes, and universities, for 2-year degree programs in environmental sciences and technology.

Broome Technical Community College in Binghamton, New York, specializes in preparing students for environmental technician jobs. To give you an idea of the job scope, here's a list of the areas graduates enter:

A. County and city health departments
  1. Environmental health technicians (civil service)
    a. Milk plant and dairy farm sanitation
    b. School sanitation
    c. Institution sanitation
    d. Refuse sanitation
    e. Food service sanitation
    f. Rodent and insect control
    g. Air pollution control
    h. Water supply control
    i. Water pollution control
    j. Sewage disposal
    k. Temporary residence sanitation
    l. Swimming pool and bathing beach sanitation and safety
    m. Housing sanitation and safety
    n. Radiation safety
    o. Sanitary surveys
  2. Camp sanitary aide (civil service—summer months only)
    a. Temporary residence sanitation
    b. Swimming pool and bathing beach sanitation and safety

C. State Department of Agriculture and Markets (civil service)
  1. Milk products inspector
    a. Milk and milk products sanitation and adulteration
  2. Food products inspector
    a. Food processing sanitation and adulteration
    b. Food service sanitation and adulteration

B. State Health Department
  1. Engineering technician
    a. Air sampling

D. Housing and urban renewal agencies
  1. Housing inspector
    a. Housing sanitation and safety

E. Colleges and universities
  1. Sanitary inspector
    a. Food service sanitation
    b. Dormitory and fraternity-sorority house sanitation and safety

F. Milk processors and dairy farm cooperatives
  1. Dairy farm inspector
    a. Dairy farm sanitation

G. Food processors
  1. Sanitary inspectors
    a. Food plant sanitation

H. Food service and restaurant chains
  1. Sanitary inspector
    a. Food service sanitation

I. Motel chains
  1. Sanitary inspector
    a. Food service sanitation
    b. Motel sanitation and safety

J. Detergent and sanitizer manufacturers
  1. Salesmen and consultant
    a. Milk plant sanitation
    b. Food plant sanitation
    c. Food service sanitation

K. Municipal water departments
  1. Water treatment plant operator
    a. Water supply control
  2. Water plant laboratory technician
    a. Chemical and bacteriological water analysis

L. Municipal sewage departments
  1. Sewage treatment plant operator
    a. Sewage treatment control
  2. Sewage plant laboratory technician
    a. Chemical and bacteriological laboratory analysis

M. Public health laboratories
  1. Laboratory technician
    a. Chemical and bacteriological analysis

N. Consulting engineering firms
  1. Engineering assistant
    a. Water supply development and treatment
    b. Waste water treatment and pollution control
    c. Refuse disposal

O. Restaurant associations
  1. Sanitation inspector and consultant
    a. Food service sanitation

249
(7)

The second paraprofessional group is made up of *environmental aides* (sometimes called *inspectors, sample operators,* or *monitors*) who usually do not have a college degree. Aides collect, monitor, record, and report data, to name a few of their tasks. Advancement for aides is limited unless they take on-job or extension training and become exceptionally skilled at their tasks.

Other environmental technicians work in forestry, recreation, wildlife conservation, architecture, urban planning, pest control, landscaping, population management, and many more environmental areas.

CHECK THE FILE IN THE HEALTH CENTER

TALK WITH YOUR TEACHER ABOUT EXPLORATION OPPORTUNITIES

Career horizons

We know that building a better environment can be done only by people working hard at it. We have come to realize that just part of the work can be done by volunteer enthusiasts--that more of the workers have to be full-time professionals and paraprofessionals employed by government, private industry, and consulting or service firms.

We have learned that the Environmental Decade will probably not be a mere 10 years of spirited Earth Days and Earth Weeks. But, rather, steady, purposeful, productive years of professional and technical work towards a better environment. With adequate professional training and hard work, you may become part of this career team.

For more career information

Pamphlets

Air Pollution Control Employment Bulletin
Ability Search
Suite 202, Davis Bldg.
1629 K St. NW
Washington, DC 20006
Send for free brochure on careers in air pollution control.

Marine Technology Society
1730 M St. NW, Suite 412
Washington, DC 20036
Write for "The Oceans and You," a kit that includes a list of colleges and universities offering oceanography programs. Single kits and postage about $3; 10 to 100 kits about $2.50 each.

Public Affairs Pamphlets
381 Park Ave. S.
New York, NY 10016
Send 35¢ for "The Campaign for Cleaner Air," 32-page booklet.

Science Research Associates
259 E Erie
Chicago, Il. 60611
Check your counselor's office or library for: Occupational Briefs #187 "Landscape Architects;" #209 "City Planners," #177 "Sanitary Engineers;" #50 "Foresters;" #340 "Forest Technicians," #188 "Geographers;" #149 "Wildlife Managers," or #217 "Industrial Hygienists."

Books

Career Opportunities: Ecology, Conservation, and Environmental Control
J. G. Ferguson Publishing Co., 1971
6 North Michigan Ave.
Chicago, Il. 60607
$6.95

Opportunities in Environmental Careers
By Odom Fanning
Vocational Guidance Manuals, 1971
235 E 45 St.
New York, NY 10017
$5.75

Opportunities in Geology and Geological Engineering
By Alfred K. Snelgrove
Vocational Guidance Manuals, 1970
235 E 45 St.
New York, NY 10017
$1.95

Opportunities in Meteorology
By Miles F. Harris
Vocational Guidance Manuals, 1972
235 E 45 St.
New York, NY 10017
$5.50

Opportunities in Oceanographic Careers
By Odom Fanning
Vocational Guidance Manuals, 1969
235 E 45 St.
New York, NY 10017
$1.95

Key Government Agencies

Send for free career or recruiting literature from any of the following:

ATOMIC ENERGY COMMISSION
Division of Environmental Protection
Washington, DC 20545

DEPARTMENT OF AGRICULTURE
1. Agricultural Research Service
2. Forest Service
3. Soil Conservation Service
Washington, DC 20250

DEPARTMENT OF COMMERCE
1. Economic Development Administration
2. Maritime Administration
3. National Oceanic and Atmospheric Administration
Washington, DC 20230

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education, Environmental Education Center
Washington, DC 20202

DEPARTMENT OF THE INTERIOR
1. Bureau of Land Management
2. Bureau of Mines
3. Bureau of Outdoor Recreation
4. Bureau of Reclamation
5. Geological Survey
6. National Park Service
7. Office of Coal Research
8. Office of Minerals and Solid Fuels
9. Office of Oil and Gas
10. Office of Water Resources Research

A quick look at pollution prevention and control

The jobs in this area are concerned with undesirable and/or foreign matter in air, water, and/or soil. Some of the more common types of these pollutants are animal wastes, household wastes, industrial wastes, disease-causing substances, plant residues, sediments, plant nutrients, minerals, pesticides, radioactive materials, airborne substances, and even noise!

Each of these pollutants requires workers to monitor (keep watch over), inspect, measure, test, and regulate the tolerable amount in various locations.

air analyst (3,4)	Uses a dust collecting device and other equipment to analyze samples of air in factories and other work areas. Determines the amount of pollutants and results of control methods.
chemist, water purification (1,2)	Analyzes the quality of water in water purification plants. Controls chemical processes that soften water or make it drinkable.
industrial waste inspector (3,4)	Inspects waste disposal plants. Investigates sources of pollution in city sewage to make sure standards are met. Takes samples of waste from sewers, storm drains, and waterways for lab tests.
radiation monitor (3,4)	Checks workers, plant facilities, and work environments for radioactive contamination. Collects air samples to find the amount of radioactivity in the air. Gives information on dangerous levels and instructs workers in radiation safety.
safety and sanitary inspector (3,4)	Inspects equipment and oversees work activities of employees in industrial plants. Makes sure sanitary and safety regulations are met.
septic tank serviceperson (4)	Cleans and repairs septic tanks (tanks in which solid wastes are broken down by bacteria).
sewage plant operator (4)	Operates sewage treatment and disposal equipment. May take sewage samples at various stages of treatment and perform routine lab tests.
supervisor, water and sewer systems (2)	Supervises installation, maintenance, and repair of water and sewage facilities. Finds best way to excavate and make repairs, using maps and diagrams.
water tender (4)	Tests drinking water for purity and collects water for lab analysis. Adds chemicals to obtain desired quality.

(1) usually requires post-graduate studies
(2) usually requires a 4-year bachelor's degree
(3) usually requires a 2-year associate degree
(4) usually requires some on-job or other training after high school

NURSING CAREER INTEREST PACKET

The Kind of Person Making a Successful Nurse; Factors to be Considered
- Health
- Common Sense
- Intelligence
- Personality
- Maturity
- Previous Experiences and Interests

Preparation in High School for Nursing and Allied Careers
- Courses needed
- Vocational courses
- Extracurricular Experiences and Interests
- Grades

Pathways to Nursing
- The Nursing Ladder
- Nursing School Requirements

Where Do Nurses Work?

- Public Health
- Industry and Commerce
- Schools
- Home
- Government Service
- Doctor's Offices
- Nursing Education
- Private Duty
- Camps and Other Institutions
- Publications
- Hospitals
- Colleges

Nursing Specialties

Duties of the Nurse
- Registered Nurse
- Licensed Practical (Vocational) Nurse
- Nurse Aide
- Hospital Orderly

Observing a Nurse at Work

Organization of the Nursing Department of a Hospital

NURSING SKILLS AND DUTIES

Cleanliness, Disinfection and Asepsis
- Asepsis explained
- Other Means of Controlling Infection and the Growth of Microorganisms
- Washing the Hands
- Sterilization vs. Disinfection
- The "Why" and "How" of Bacterial Growth
- Preparing the Baby's Formula Using Terminal Sterilization

Noting and Recording Vital Signs
- What are the Vital Signs?
- Temperature
- Pulse Rate
- Respiration Rate
- Blood Pressure
- Charting Vital Signs

Patient Care, and the Care of the Hospital Room or Hospital Unit
- Bed Making
- The Hospital Room or Unit
- Patient Care and Daily Hygiene
  - Washing the patient's hands and face
  - Care of the mouth and teeth
  - Feeding the patient

Emergency Care of the Sick or Injured
- What is First Aid?
- Where Nurses Use First Aid
- Basic First Aid Procedures
  - Severe Bleeding
  - Stoppage of Breathing
  - Poisons and Drugs
  - Shock

Professional Standards of Conduct for Nurses and Allied Personnel
- Ethics
- Professional "Do's" and "Don't's"
- Legal Definition of Nursing Practice
- International Code of Ethics for Nurses

WHAT KIND OF YOUNG PERSON WOULD MAKE A GOOD NURSE?

WHAT KIND OF YOUNG PERSON ARE HOSPITALS, NURSING SCHOOLS, AND COLLEGES LOOKING FOR AS POSSIBLE NURSES?

All schools and institutions accepting nursing candidates, or giving nursing jobs try to answer one basic question, "Is she capable of becoming a nurse?" They answer this question in several different ways.

HERE ARE SOME THINGS THEY ARE ALL LOOKING FOR:

1. How is your health?

   Most institutions generally require a complete and thorough medical and laboratory exam. Are you in reasonably good health? Are you severely underweight or overweight? Do you have any chronic illness? Will your health prevent you from performing your duties?

2. Do you have good common sense and some intelligence?

   One of the ways institutions gauge, rightly or wrongly, your intelligence, is by the marks and grades you have earned. They will be most interested in your ability in science since science underlies many of the things you will be called on to perform. They will try to find out about your common sense through an interview with you. They will require good referances from your teachers and guidance advisors. They will try to get as complete a picture of you as possible.

   Naturally, if you have good study habits, some degree of intelligence and good common sense you will in the eyes of the admitting institution be a good bet to succeed.

3. Do you have a pleasing personality?

   You may have discovered that PERSONALITY is a hard word to define. Here are some clues that will help an admissions officer form an opinion.

   --Do you like people?
   --Do people like you?
   --Do you have a good sense of humor, but not at the expense of others?
   --Do you radiate good will?
   --Do you like people well enough to put up with the crabbiness and irritability of people who don't feel well?
   --Can you handle situations under which you will have great pressure such as emergency situations?

These aspects of your personality can be discovered very early in your training career. But, if you have positive answers then you know that you can handle most situations and can get along with people..

4. Do you show evidences of maturity?

Hospitals and nursing schools are looking for evidences of increasing maturity, although they know that you will mature faster as you progress on the job or at school.

The evidences of maturity include:

--Are you dependable?
--Have you attended school regularly without absence?
--Are you usually on time or rarely late to school?
--Are you over seventeen years of age?
--Are you willing to accept difficult assignments?
--Can you accept responsibility to do the best job that you can?
--Can you accept suggestion and criticism?
--Can you work well under authority and under supervision?
--Can you function well as a member of the health team?
--Can you accept the discipline of attending to routines even though you may not like routine assignments?

5. What previous experiences and interest do you show in a health career?

Hospitals and nursing schools will look more favorably on your application for admittance if you can show that you have a serious interest in nursing as a career. Here are some ways by which you can do this:

--Experience as a nursing volunteer or "candy-striper."
--Member of a school "Future Nurses" Club.
--Work experience involving others such as "Mother's Helper," baby-sitter, or volunteer worker in Old Age Home.
--Enrollee in the school work-study program.
--Experience in after-school or summer vacation work programs.

HOW CAN YOU PREPARE FOR A NURSING CAREER WHILE IN HIGH SCHOOL?

The very first step toward a nursing career is graduation from high school. Colleges offering courses in professional nursing and hospital nursing schools all require high school graduation.

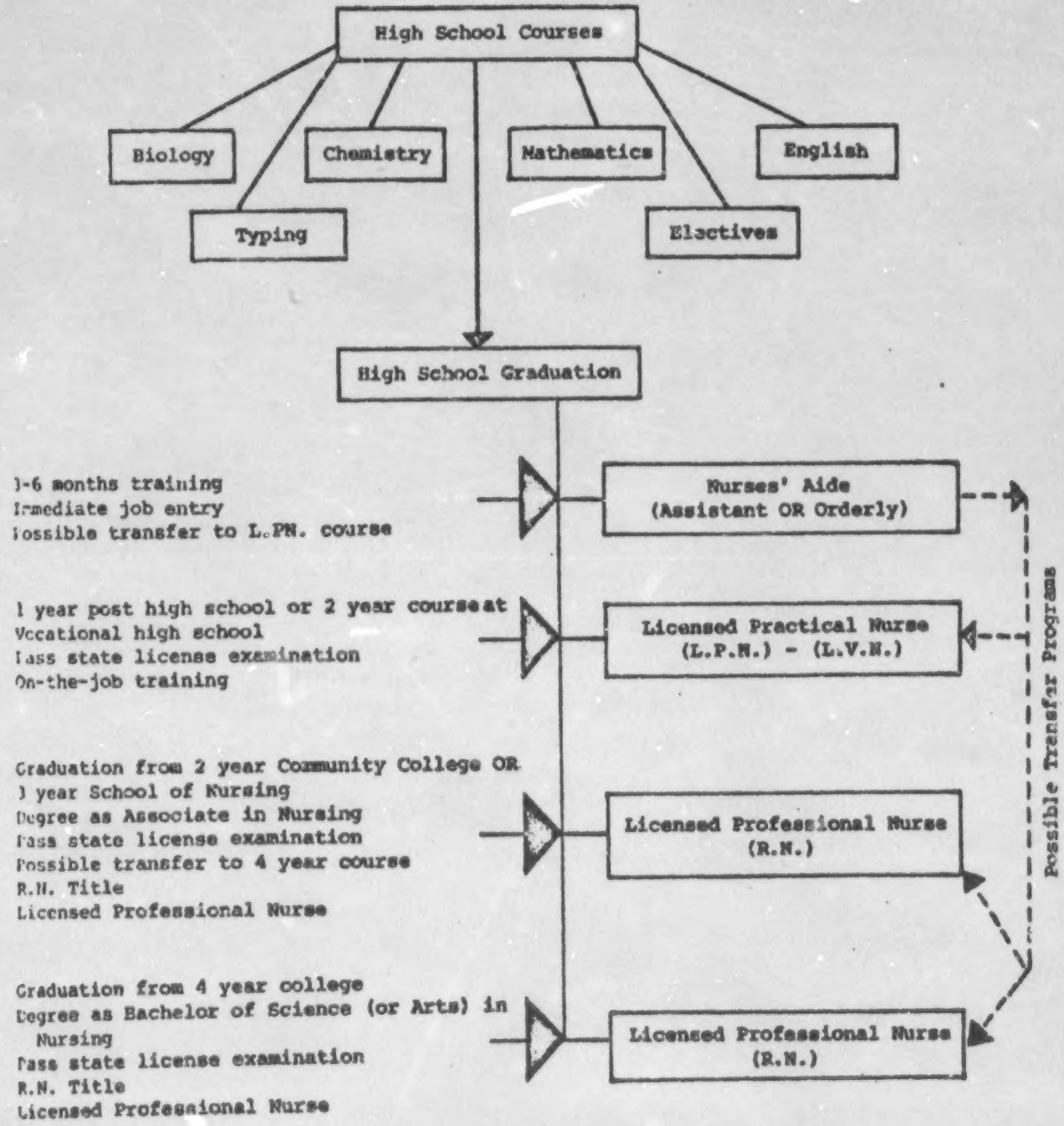
All nursing careers are heavily weighted in science. Therefore during high school you should have at least one year of general biology and one year of general chemistry. It is strongly suggested that you complete all required mathematics courses. You will find that typing is a valuable skill, strongly needed by nurses as well as college students. A year and a half of typing is advised. You should also be able to communicate well in both written as well as spoken English. These subjects are basic and necessary for a successful career in nursing.

Most professional nursing schools and colleges will admit without question students from the top half of their class. It is strongly advised that you present as strong a record of academic achievement as you can. Such a record will assure admittance to the school or college of your choice.

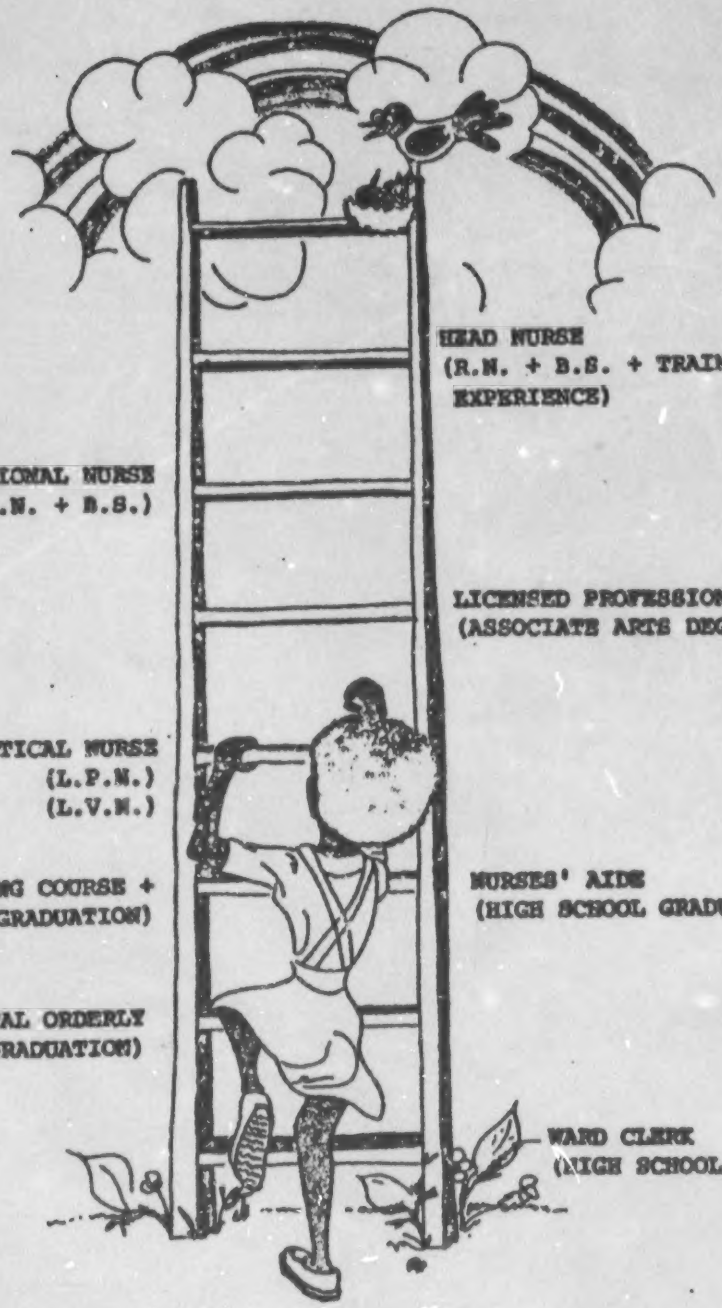
Practical training courses taken in high school will serve to enhance your application. If you have taken a course in Home Nursing, or one leading to licensing as a Licensed Practical Nurse or Nurse Aide, you can be assured of immediate entry to beginning nursing jobs. Some students work at these jobs first, so that they can decide whether nursing is the career for them.

Some schools and hospitals will give preference to students who have successfully completed such preliminary courses. They will give course credit if a student passes a state administered examination for college proficiency in nursing. There are many hospitals that offer career ladder opportunities for their employees. They offer courses to become L.P.N.'s. Eventually, if your motivation is strong enough, and you show potential, hospitals will admit you to their professional school of nursing.

PATHWAYS TO NURSING



HOW HIGH CAN YOU CLIMB THE NURSING LADDER?



HEAD NURSE
(R.N. + B.S. + TRAINING AND EXPERIENCE)

LICENSED PROFESSIONAL NURSE
(R.N. + B.S.)

LICENSED PROFESSIONAL NURSE (R.N.)
(ASSOCIATE ARTS DEGREE)

LICENSED PRACTICAL NURSE
(L.P.N.)
(L.V.N.)

(SPECIAL TRAINING COURSE +
(HIGH SCHOOL GRADUATION)

NURSES' AIDE
(HIGH SCHOOL GRADUATION)

HOSPITAL ORDERLY
(HIGH SCHOOL GRADUATION)

WARD CLERK
(HIGH SCHOOL GRADUATION)

FOR MORE INFORMATION CHECK THE FILE IN THE HEALTH CENTER.

' YOUR TEACHER ABOUT EXPLORATION OPPORTUNITIES

PHYSICAL THERAPY CAREER INTEREST PACKET

Physical Therapy attempts to provide treatment and healing for people of all ages. The Physical Therapist treats:

Handicapped children

Children may be born with birth defects which render them unable to perform normal functions. They may have such disabling diseases as cerebral palsy, muscular dystrophy and brain injury. They can be helped by methods of physical therapy.

Young adults

Young adults are more daring, take more chances and are therefore involved in the greatest number of accidents causing injury and disablement.

The middle years adult

This is the age when strokes, heart disease and arthritis may set in. Such diseases demand the services of the physical therapist for healing, curing and helping them regain normal living activities.

The elderly

During old age, chronic ailments such as arthritis, rheumatism, hardening of the arteries and high blood pressure take their toll in disability and sickness.

WHAT IS PHYSICAL THERAPY?

THERAPY MEANS - to cure or to heal.

PHYSICAL THERAPY MEANS - to cure, to heal or to treat injury and disability by PHYSICAL MEANS such as heat, light, water, sound, electrical and short save energy and exercise.

It seeks to improve muscle strength, improve circulation and blood supply, restore motion lost in the limbs, relieve pain, correct deformities and help to achieve normal living existence such as gainful employment and independence of action in home and social life.

WHAT DOES THE PHYSICAL THERAPIST DO?

MASSAGE - involves stroking, rubbing, kneading and squeezing.

HYDROTHERAPY - involves the use of wet heat, cold as well as the action of moving water, as in a Hubbard Tank, or whirlpool bath.

EXERCISE - involves passive, assistive, active and resistive exercises. It also includes teaching the patient how to relax to save strength and resist fatigue, and muscle stretching.

HEAT AND LIGHT - involves the usual heating pads, hot water bottle, but also includes other methods such as paraffin bath, diathermy, infra-red baking and ultraviolet light.

ACTIVITIES OF DAILY LIVING - involves helping with daily personal care, use of equipment needed in daily living and communicating.

AMBULATION - involves teaching the use of the wheelchair, crutches, braces, canes and artificial limbs. It also teaches a disabled person how to drive a car.

EDUCATION AND TRAINING FOR A LICENSED PHYSICAL THERAPIST

Licensed physical therapists are usually graduates of a four- or five-year college course offering specialized training and education in physical therapy. Such courses are usually approved by the American Medical Association and by the American Physical Therapy Association. Students who attend two-year community colleges may transfer to a four-year liberal arts college and major in physical therapy. Also, graduates of a four-year liberal arts college may take a fifth year of postgraduate study specializing in physical therapy.

It is advised that prospective therapists get practical training while working with a licensed physical therapist or doctor specializing in physical medicine. Part-time practical experience or summer experience will prove a great help. In more and more states, graduates are required to have at least one year of practical experience before becoming eligible for licensure. Licensed Physical Therapists are required to pass a special license examination given in most states.

Students should have some proficiency in the biological and physical sciences and some fundamental knowledge of mechanics and principles underlying basic physics. There should be strong motivation for this field since students will be working with the sick, the elderly and the disabled. Practical experience while working with these people who need help will help to resolve the students' ideas about entering this exciting career.

ALLIED CAREERS IN PHYSICAL THERAPY

THE PHYSICAL THERAPY ASSISTANT

This career is quite new in the field. It has come to be more widely accepted in the past five years.

The Physical Therapy Assistant works closely with the licensed physical therapist to help restore the physical abilities and functions of disabled patients. They also work to prevent further disability or illness. The assistant serves as an important member of the REHABILITATION TEAM to help disabled patients lead more useful and productive lives.

WHAT THE PHYSICAL THERAPY ASSISTANT MAY DO

--Help the licensed therapist to perform tasks such as testing patients to determine the necessary treatment.

--Help position patients for needed treatment.

--Use special therapy equipment under the direction and supervision of the therapist. Such equipment must conform to safety regulations for its use.

--Help to apply physical treatment agents such as heat packs, cold packs, light, sound waves and massage.

--Watch patients closely during treatment and report observations.

--Help patients perform necessary therapeutic exercises.

--Assist patients with such ambulatory activities as walking, climbing stairs and manipulating a wheelchair.

--Help patient to dress and undress for necessary treatments.

--Assist, remove or replace such devices as braces, splints, slings and other treatment devices.

--Transport or assist in the movement of patients to and from treatment areas.

--Instruct patients in the use and care of prosthetic (artificial limbs) and orthotic (braces) devices.

--Care for, assemble and maintain treatment areas and equipment.

--Maintain a safe, clean and orderly treatment environment.

--Perform necessary clerical tasks such as writing reports, keeping records of patient treatment, making appointments and acting as a receptionist.

TRAINING AND EXPERIENCE FOR ENTRANCE AS ASSISTANT PHYSICAL THERAPIST

Before 1969, most assistants got their training while working on the job in hospitals or other approved health care facilities. Since that time, most community or junior colleges have begun assistant training programs with the object of upgrading the status of the physical therapy aide, who is comparable in status to the nurse's aide. Community colleges now offer a degree of Associates in Arts (A.A.) as Physical Therapist Assistant.

There are a large number of junior or community colleges that now offer a training course to qualify for an Assistant Physical Therapist and for licensure in those states that require licenses. The number of colleges offering such courses is increasing steadily. The demand for qualified personnel has also increased in the past five years, especially with the added recognition accorded this position.

THE PHYSICAL THERAPY AIDE OR REHABILITATION AIDE

The Physical Therapy Aide is comparable to the Nurse's Aide, except that he works in the therapy or rehabilitation department of a hospital, rehabilitation center or medical center. The aide is the lowest grade of worker accorded professional recognition in the therapy field.

WHAT THE AIDE MAY DO

--Prepare the patient for prescribed treatment

--Help to position the patient for treatment

--Set up the modality (kind of treatment) needed by the therapist.

--Prepare needed supplies and have them readily on hand.

--Help to transfer patients safely to and from the bed, toilet, tub, plinth (exercise table) and other areas to be used.

--Help to prepare patients with corrective orthotic and prosthetic devices.

--Guard and assist patients in ambulating (moving about).

--Assist patients with prescriptive exercises, use of weights and the like.

--Supervise prescribed exercise treatments.

--Provide patients with equipment needed for mat sessions, ball playing and other exercise treatments.

--Help to transfer patients safely to and from treatment tanks and pools.

--Assist in teaching patients safe and approved methods of ambulation.

--Help to maintain a safe, orderly, clean treatment area.

--Provide hygienic personal care of patients.

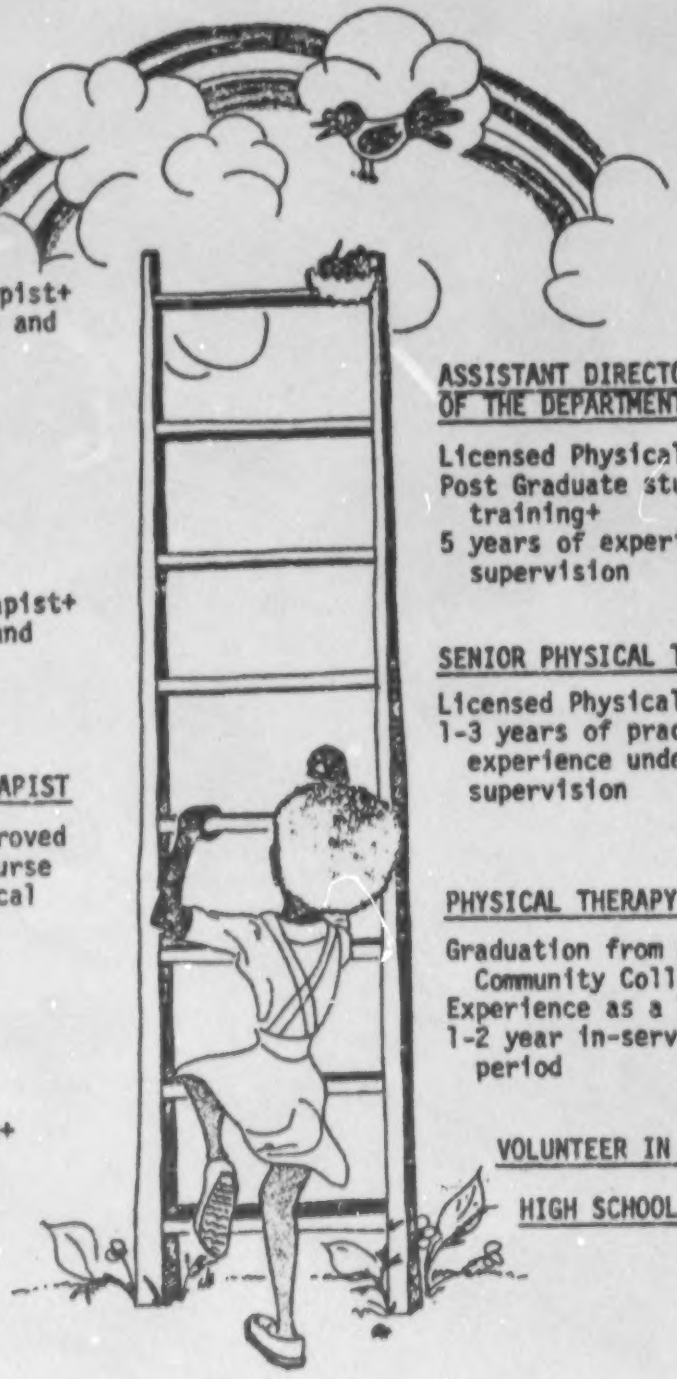
--Do necessary clerical tasks such as record keeping, filing and the like.

--Serve as a receptionist in the treatment area.

TRAINING AND EXPERIENCE FOR ENTRANCE AS PHYSICAL THERAPY AIDE

Most hospitals and rehabilitative institutions provide an in-service training program for entrance as aides. The program of education and training thus provided is designed to upgrade necessary skills and the professional status of the aide. After completing the training program, the applicant becomes an aide. In many instances, after a certain amount of practical experience, he is eligible for entrance to the assistant's training program. After a three to six month training period, the aide is usually assigned to work under the supervision of a senior therapist.

HOW HIGH CAN YOU CLIMB THE THERAPY LADDER?



DIRECTOR

Licensed Physical Therapist+
Post Graduate Education and training+
Five or more years of experience including administrative responsibilities

UNIT SUPERVISOR

Licensed Physical Therapist+
3-5 years of training and experience under supervision

LICENSED PHYSICAL THERAPIST

Graduation from an approved four year college course with a B.S. in Physical Therapy+
One year of on-the-job training experience

PHYSICAL THERAPY AIDE

Work as a Nurse's Aide+
3-6 months on-the-job training period

ASSISTANT DIRECTOR OF THE DEPARTMENT

Licensed Physical Therapist+
Post Graduate study and training+
5 years of experience under supervision

SENIOR PHYSICAL THERAPIST

Licensed Physical Therapist+
1-3 years of practical experience under supervision

PHYSICAL THERAPY ASSISTANT

Graduation from a 2-year Community College Course, OR
Experience as a Therapy Aide+
1-2 year in-service training period

VOLUNTEER IN A HOSPITAL

HIGH SCHOOL GRADUATE

--Help patients perform necessary therapeutic exercises.

--Assist patients with such ambulatory activities as walking, climbing stairs and manipulating a wheelchair.

--Help patient to dress and undress for necessary treatments.

--Assist, remove or replace such devices as braces, splints, slings and other treatment devices.

--Transport or assist in the movement of patients to and from treatment areas.

--Instruct patients in the use and care of prosthetic (artificial limbs) and orthotic (braces) devices.

--Care for, assemble and maintain treatment areas and equipment.

--Maintain a safe, clean and orderly treatment environment.

--Perform necessary clerical tasks such as writing reports, keeping records of patient treatment, making appointments and acting as a receptionist.

TRAINING AND EXPERIENCE FOR ENTRANCE AS ASSISTANT PHYSICAL THERAPIST

Before 1969, most assistants got their training while working on the job in hospitals or other approved health care facilities. Since that time, most community or junior colleges have begun assistant training programs with the object of upgrading the status of the physical therapy aide, who is comparable in status to the nurse's aide. Community colleges now offer a degree of Associates in Arts (A.A.) as Physical Therapist Assistant.

There are a large number of junior or community colleges that now offer a training course to qualify for an Assistant Physical Therapist and for licensure in those states that require licenses. The number of colleges offering such courses is increasing steadily. The demand for qualified personnel has also increased in the past five years, especially with the added recognition accorded this position.

THE PHYSICAL THERAPY AIDE OR REHABILITATION AIDE

The Physical Therapy Aide is comparable to the Nurse's Aide, except that he works in the therapy or rehabilitation department of a hospital, rehabilitation center or medical center. The aide is the lowest grade of worker accorded professional recognition in the therapy field.

WHAT THE AIDE MAY DO

--Prepare the patient for prescribed treatment

--Help to position the patient for treatment

--Set up the modality (kind of treatment) needed by the therapist.

--Prepare needed supplies and have them readily on hand.

--Help to transfer patients safely to and from the bed, toilet, tub, plinth (exercise table) and other areas to be used.

--Help to prepare patients with corrective orthotic and prosthetic devices.

--Guard and assist patients in ambulating (moving about).

--Assist patients with prescriptive exercises, use of weights and the like.

--Supervise prescribed exercise treatments.

--Provide patients with equipment needed for mat sessions, ball playing and other exercise treatments.

--Help to transfer patients safely to and from treatment tanks and pools.

--Assist in teaching patients safe and approved methods of ambulation.

--Help to maintain a safe, orderly, clean treatment area.

--Provide hygienic personal care of patients.

--Do necessary clerical tasks such as record keeping, filing and the like.

--Serve as a receptionist in the treatment area.

TRAINING AND EXPERIENCE FOR ENTRANCE AS PHYSICAL THERAPY AIDE

Most hospitals and rehabilitative institutions provide an in-service training program for entrance as aides. The program of education and training thus provided is designed to upgrade necessary skills and the professional status of the aide. After completing the training program, the applicant becomes an aide. In many instances, after a certain amount of practical experience, he is eligible for entrance to the assistant's training program. After a three to six month training period, the aide is usually assigned to work under the supervision of a senior therapist.

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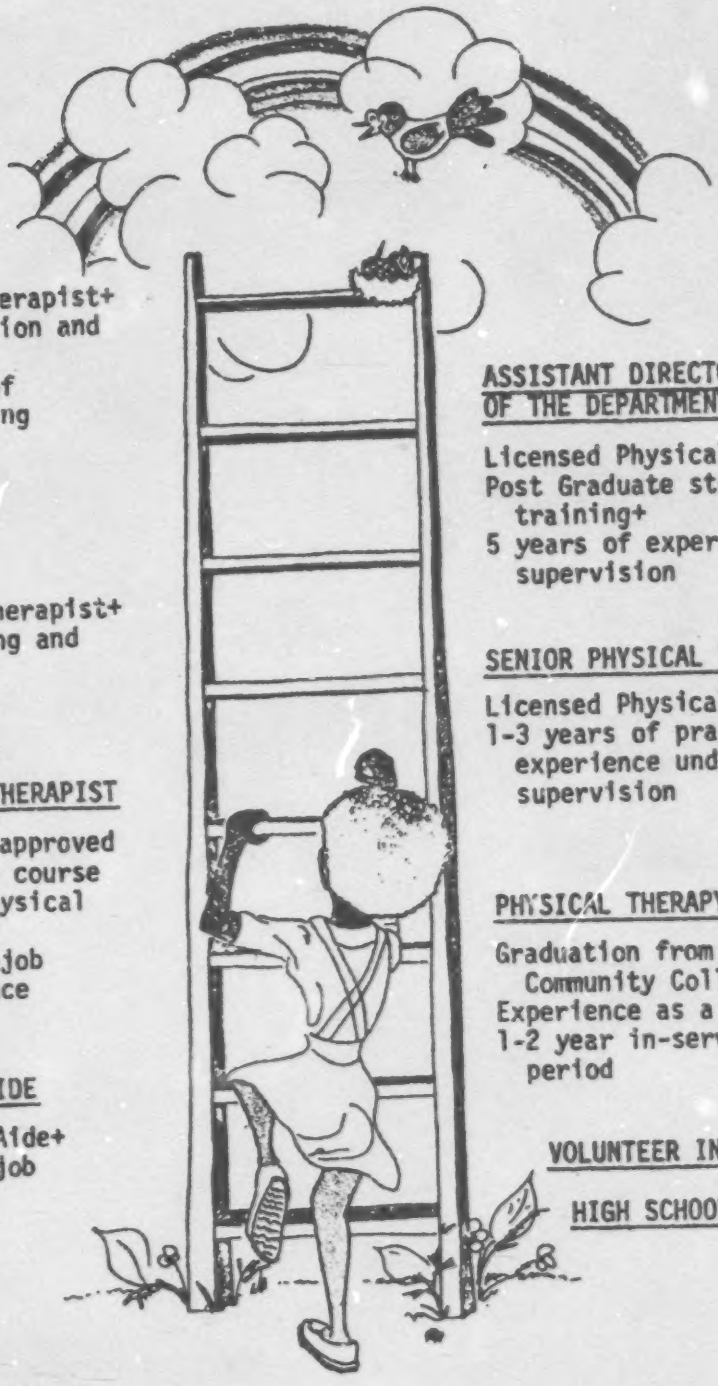

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Graduation from a 2-year Community College Course, OR
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1-2 year in-service training period

VOLUNTEER IN A HOSPITAL

HIGH SCHOOL GRADUATE

... INFORMA... CHECK THE FILE IN THE HEALTH CENTER

... YOUR TEACHER ABOUT EXPLORATION OPPORTUNITIES

OCCUPATIONAL THERAPY CAREER INTEREST PACKET

What is Occupational Therapy?

The word THERAPY means to cure or to heal.

OCCUPATIONAL THERAPY MEAN — to provide a wide variety of activities and experiences that will relate the patient to his everyday life and thus provide the link between the hospital or rehabilitation center and his return to his home and community life. Treatment is medically prescribed.

The key word is OCCUPATION, which mean work. But this therapy also involves recreation and the activities of daily living which will help him take his place in his home, in earning a living, in his hobbies and recreation, and in his social activities.

WHAT DOES THE OCCUPATIONAL THERAPIST DO?

HELPS TO RESTORE PHYSICAL FUNCTION BY: increase in joint motion, improving physical strength of muscles and improved muscle coordination.

TEACH HOW TO ADJUST TO HOME ROUTINES BY: simplifying work at home, or by the use of adapted equipment to help with housework.

TEACH SELF-HELP ACTIVITIES SUCH AS: eating, dressing, washing, writing, etc. Teach how to use special equipment such as braces, artificial limbs, etc.

LEARN WORK TOLERANCE AND MAINTAIN SPECIAL SKILLS: which will improve the ability to work or to get a job.

HELP TO DIRECT RECREATIONAL AND HOBBY INTERESTS.

TEST AND DETERMINE PHYSICAL AND MENTAL CAPACITIES AS WELL AS: social adjustment, special interests work habits and skills for getting a job.

HELP TO DIRECT INTERESTS AND ABILITIES IN CASES OF PROLONGED HOSPITAL AND CONVALESCENCE PERIOD.

USE SATISFYING EMOTIONAL RESPONSES OF THE PATIENT AS A HELP TOWARD DIAGNOSING NEEDS OF THE PATIENT FOR FUTURE TREATMENT.

EDUCATION AND TRAINING FOR A LICENSED OCCUPATIONAL THERAPIST

The Licensed Occupational Therapist usually requires four years of specialized college training with a degree of Batchelor of Science in Occupational Therapy. College courses offering occupational therapy are available in about 35 colleges throughout the United States. Such courses usually receive approval by the American Medical Association Council on Medical Education, in conjunction with the American Occupational Therapy Association. In addition to a four-year college course, usually one year of practical training is required for licensure in those states that require a license to practice. For those who already have a college degree, it is possible to enroll in a post-graduate course of about a year and a half to take specialized courses in both academic and clinical work.

The emphasis in preparation for occupational therapy is upon the biological and physical sciences. Students also take courses for proficiency in manual and creative skills, recreational activities and in educational subject. A national examination is given each year by the American Occupational Therapy Association. upon passing this examination, the therapist will be professionally recognized and qualified to use the identification of "O.T.P." in the same way a doctor uses the initials "M.D." after his name.

ALLIED CAREERS IN OCCUPATIONAL THERAPY

THE OCCUPATIONAL THERAPY ASSISTANT

The career of a Physical Therapy Assistant is quite new to the field, but the position has come to be increasingly recognized in the past five years.

The Occupational Therapy Assistant works closely with the licensed therapist to help in the rehabilitation of patients who may be mentally, emotionally or physically disabled. The assistant serves as a valuable member of the rehabilitation team.

WHAT THE OCCUPATIONAL THERAPY ASSISTANT MAY DO

--They help to carry out programs and doctor's prescriptions under the supervision of a licensed therapist to strengthen the patient's muscle power.

--They help to increase the range of motion of disabled and paralyzed patients.

--They help the patient to become more independent and self-sufficient through a variety of activities and use of a variety of equipment.

--They teach a broad range of skills in areas such as:

woodworking
ceramics
graphic arts
recreational and social games and diversions
dramatics
gardening
self-care skills such as eating, etc.

--They have such tasks as:

ordering supplies
keeping inventories of supplies and equipment
preparing work materials for the therapist
maintaining equipment and tools
performing clerical duties

--Assist the therapist in teaching basic skills to large groups of patients.

--Give emotional comfort to patients to overcome despair and discouragement.

--Observe and report progress of patients.

TRAINING, EXPERIENCE AND EDUCATION FOR ENTRANCE AS AN ASSISTANT OCCUPATIONAL THERAPIST

Before 1969, most assistants got their training while working on the job under the supervision of a licensed therapist. Some learned their skills in manpower and technical training programs offered by state or federal agencies. Now, many of the assistants get their education and training from a two-year community college course. However, in either case, practical training and experience are necessary to qualify for the position. Preference is usually given to applicants who have experience as a Nurse's Aide, Licensed Practical Nurse or those who have had some volunteer experience in a Rehabilitation Center or the Rehabilitat Department of a hospital.

FOR MORE INFORMATION CHECK THE FILE IN THE HEALTH CENTER.

TALK WITH YOUR TEACHER ABOUT EXPLOATION OPPORTUNITIES

Beyong the classroom is a three part step by step approach to field explorations.

The Health Career Groupings alone may not appear directly health related. Each one however, has a direct relationship to the wide field of careers open in the health area.

Progression of Exploratory Experiences is a graphic representation of the building block plan. Career exposures can not be hit and miss. They must be built upon both past and present experiences. Students begin on Step 1 and travel only as far as their interests carry them.

Sample Exploratory Experiences is a suggested list suitable to a large metropolitan area. By using this list as a guide most resources or similiar resources can be found in each community or near by.

GENERAL HEALTH CAREER INTEREST AREAS/Health and Health Related Possibilities

Biology

Community Worker

Cook

Dental

Ecology/Conservation

Medical Technician

Medicine

Nursing

Pharmacy

Psychology

Social Work

Special Education

Therapy

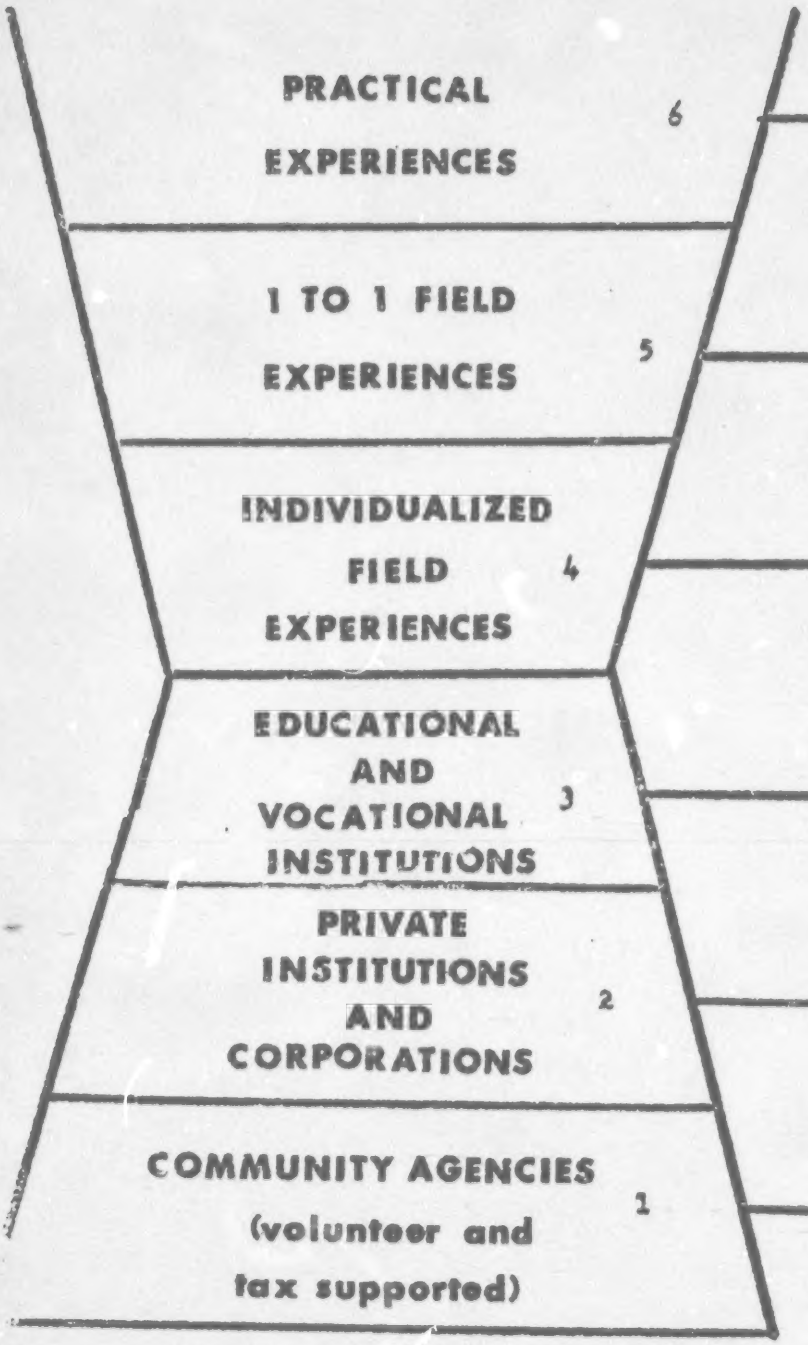
Veterinarian Medicine

Youth Worker

Zoology

NOTE: Exploration Exposures should be organized in a building block pattern moving from step 1 to step 6. This type of organization will allow students to move as far as their interests carry them.

EXPLORATION EXPOSURES


PRACTICAL EXPERIENCES
6
i.e. city or county well - child clinics, nursing home assistants, Loaves and Fishes.
1 TO 1 FIELD EXPERIENCES
5
i.e. spending a day at a health specialist's side.
INDIVIDUALIZED FIELD EXPERIENCES
4
i.e. care centers for the aged, sheltered workshops, Trojan Nuclear Plant.
EDUCATIONAL AND VOCATIONAL INSTITUTIONS
3
i.e. P.C.C., M.H.C.C., U. of P., business colleges.
PRIVATE INSTITUTIONS AND CORPORATIONS
2
i.e. Carolina Biological, Don Hall Lab., U. of O. M.S. - speech dept.
COMMUNITY AGENCIES (volunteer and tax supported)
1
i.e. A.R.C., U.G.N., settlement houses.

SAMPLE EXPLORATORY EXPERIENCES INTEREST AREAS:
(Portland Metropolitan Area)

General (Community Volunteer Agencies)

1. American Cancer Society
2. American Red Cross
3. Blanchet House
4. Central Fire/Disaster Center
5. Goodwill
6. Sunshine Division
7. United Good Neighbor

Biology and Zoology

1. Carolina Biological Laboratory (POwell Division)
2. United Medical Laboratory

Community, Social and Youth Work

1. Contact Center/Arbuckle Flat
2. Drug Treatment Center
3. FISH
4. Food Stamp Distribution Center
5. North Portland Youth Service Center
6. Outside-In

Cooking/Foods

1. Benson Hotel
2. Kaiser Hospital/Diet Kitchen
3. Natures Storehouse
4. Oak Knoll Winery

Dental Technology

1. Dahlin Dental Laboratory
2. Portland Community College-Sylvan Campus/Dental Department
3. Western Dental

Ecology/Conservation

1. Crown Zellerbach
2. Department of Environmental Quality
3. Forestry Center
4. Harborton
5. Trojan Nuclear Plant
6. Wildlife Management

Medicine and Medical Technology

1. Barnes Veteran's Administration Hostital
2. Emmanuel Hospital
3. Medical Laboratory/Medical-Dental Building

Nursing

1. Del's Care Center
2. Kaiser Hospital
3. Multnomah County/Multi-Service Center
4. Portland Community College-Sylvan Campus/Nursing Department
5. University of Portland-Nursing Department

Pharmacy

1. Kaiser Hospital/Pharmacy Department
2. Northwest Physical Therapy Clinic
3. University of Oregon Medical School/Physical Therapy Ward

Special Education

1. Emily School
2. Oregon School for the Blind/Salem
3. Clarendon Elementary School

Veterinary Medicine

1. C.J.'s Dog Grooming Salon
2. King Size Stables
3. Lombard Animal Hospital

Miscellaneous

1. American Ambulance
2. Multnomah County Medical Services

SUITABLE RESOURCE MATERIALS

Books

Hospitals, Sextant Series

Your Future in a Changing World, Richards Rosen Press

A Medical Careers Handbook, Horizons Unlimited

Careers and Occupation, Vols. 1 & 2, Chrysler Corp.

Career Opportunities, New York Life Insurance

You and a Health Career, Fairchild Publications

Careers in Therapy, Medical Technology & Nutrition, Fairchild Publications

Nursing and Allied Careers, Fairchild Publications

Your Future as an Optician, Richards Rosen Press

Your Career in Nursing, Messner Publications

Career Opportunities: ecology, conservation, environmental control.. Doubleday, Ferguson Publications

Handbook of Job Facts, SRA

Career Opportunities: Health Technicians, Doubleday, Ferguson Publications

Occupational Outlook Handbook, U.S. Dept. of Labor

You Can Work in the Health Services, John Day Co.

APPENDIX A

ROOSEVELT CURRICULUM

Roosevelt's plan does not employ the use of specific time locked units nor specific time locked lesson plans. Rather the Roosevelt plan has developed blocks of time for the introduction of major current health events and course goals. The method by which the time is ultimately utilized is determined by: 1)student interest (objectives/evaluation) and 2) individual teacher techniques and skills.

As is inevitable a type of curriculum pattern must necessarily exist. Due to the philosophy we utilize at Roosevelt we believe many curriculum patterns are possible and workable. We believe that a 'curriculum puzzle' can fit together successfully in a variety of ways. One way we have chosen for 1973 - 1974 - 1975 is listed below by alphabetical units:

1. Alpha to Omega (birth through death, including body system)
2. *Communication
3. *Conflict
4. Crutches (Addiction Education)
5. *Decision Making
6. First Aid
7. Human Sex and Sexuality
8. *Just Me
9. Personal Health/Fitness and Nutrition
10. World Health Problems and Environmental Hazards

* Essentially mental health but <u>not</u> total of mental health.

NOTE: It is not feasible to analyze any element of curriculum in isolation from the entire structure.

NOTE: It is not feasible to analyze any element of curriculum in isolation from the entire structure.

APPENDIX B

CREDITS

ROOSEVELT SOPHOMORES

All Four Hundred

PARENT TEACHER STUDENT ASSOCIATION

Volunteers in Portland Schools

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